

**Association of Major Power Consumers in Ontario (AMPCO) INTERROGATORY #34**

**Issue 6.0      Revenue Requirement**

**Interrogatory**

**Reference 1: Exhibit A/Tab 4/Schedule 4/p.13**

The evidence states “During the term of the 5 year plan, Hydro One plans to maintain current levels of distribution reliability, while improving customer service and satisfaction.”

**Reference 2: Exhibit E1/Tab 1/Schedule1/p.2**

The evidence states “The above Revenue Requirements are the amounts required by Hydro One Distribution to ensure the most appropriate, cost-effective solution to respond to corporate objectives mainly related to improving customer satisfaction, providing safe, reliable and affordable service and improving overall system reliability.”

- a) Please confirm if Hydro One’s objective is to maintain or improve reliability over the 5 year plan.

**Response**

Hydro One understands customer satisfaction is a key element to the success of the company. Hydro One Distribution customers have stated their preferences are to limit bill impacts and maintain the current level of reliability. Hydro One’s goal is to satisfy both these preferences by finding the balance between them. Due to the number of distribution assets currently reaching the end of service life, the level of funding Hydro One has requested is to replace the assets in areas where reliability will suffer if the assets are not replaced or refurbished. The replacement of a specific asset will improve the level of reliability in that particular area and will reduce the OM&A costs for that unit. However, it will not change the demographics of the distribution system or improve overall reliability of the system.

1 **Association of Major Power Consumers in Ontario (AMPCO) INTERROGATORY #35**

2  
3 **Issue 6.0 Revenue Requirement**

4  
5 **Interrogatory**

6  
7 **Reference:**

8  
9 Preamble: This application does not appear to deal with the Norfolk Hydro acquisition.  
10 AMPCO's understanding is that Norfolk Hydro ratepayers are to be given an initial rate  
11 decrease, followed by a multi-year rate freeze. Given normal escalation, this suggests that  
12 Norfolk operations will lose money. Hydro One has stated it will operate Norfolk  
13 separately from Hydro One.

14  
15 a) Please verify.

16  
17 **Response**

18  
19 a) Hydro One first notes that OEB approval is still pending for this application. Hydro  
20 One confirms that the MAAD application requests that the former customers of  
21 Norfolk Power Distribution Inc. be given an initial 1% reduction in their base  
22 distribution delivery rates followed by a 5-year rate freeze. The cost of this reduction  
23 will be funded from the synergies expected from the transaction. Hydro One will  
24 track costs for the Norfolk business unit separate from its legacy distribution  
25 customers. Norfolk Hydro and its distribution rates fall outside the scope of Hydro  
26 One's Custom Application.

**Ontario Energy Board (Board Staff) INTERROGATORY #87**

**Issue 6.1**      **Is the rate base component of the revenue requirement for 2015 as set out in the Custom Application appropriate?**

**Interrogatory**

**Reference:**    **Exhibit D1-1-2/Attachment 1/p. 4**

Hydro One summarizes the results of projects approved under its Incremental Capital Module case (2013 IRM application EB-2012-0136). Under Enterprise Applications Hydro One indicates spending of \$42.6 million, an increase \$13.7 million over approved spending of \$28.9 million, and increase of 47%.

Hydro One does not provide an explanation for this cost overrun. Please provide details of why the project cost was so far in excess of the amounts approved under the ICM.

**Response**

The variance the question is referring to is largely attributable to timing. The CIS project (Cornerstone Phase 4) was instituted in 2011 and was in full project mode in 2012. From time to time, CIS required many of the same resources that were originally planned for Phase 3 projects as well as the Enterprise Application Replacement projects. As a result, several projects in the Phase 3 program planned for completion in 2012 were delayed to 2013. All of the completed projects were materially on-budget in terms of total spending. However, the in-service date of several of these projects was shifted to 2013, causing the reported increase in 2013 in-service capital.

**School Energy Coalition (SEC) INTERROGATORY #48**

**Issue 6.1      Is the rate base component of the revenue requirement for 2015 as set out in the Custom Application appropriate?**

**Interrogatory**

**Reference: Exhibit C1/Tab 2/Schedule 8/p.25**

Please provide copies of all Internal Audit reports from 2010-2014 for all material capital projects.

**Response**

Please see Hydro One's response in Exhibit I, Tab 4.2, Schedule 9 SEC 35.



**School Energy Coalition (SEC) INTERROGATORY #49**

**Issue 6.1** Is the rate base component of the revenue requirement for 2015 as set out in the Custom Application appropriate?

**Interrogatory**

**Reference:**

What was the actual cost for the Cornerstone (CIS Replacement Project)? Please explain any variance with the budgeted cost.

**Response**

Below is the table of actual versus budgeted costs for Cornerstone Phase 4 (CIS Replacement Project).

Description (in \$M)	Budget and OEB Approved	Actual	Variance
OM&A	24.4	25.5	1.1
Capital (including MFA)	155.4	153.7	(1.7)
Total	179.8	179.2	(0.6)

OM&A costs were slightly higher than budget due to transformation work (training, work instructions and change management) and data cleansing.

**Association of Major Power Consumers in Ontario (AMPCO) INTERROGATORY #36**

**Issue #6.1 Is the rate base component of the revenue requirement for 2015 as set out in the Custom Application appropriate?**

**Interrogatory**

**Reference: Exhibit D1/Tab 1/Schedule 1/p.2 Table 1**

- a) Please provide an estimate of the 2014 mid-year distribution rate base, in the form of D1-1-1 Table 1.

**Response**

- a) The calculation for 2014 mid-year distribution rate base is provided below. Please note that this is a hypothetical calculation as 2014 is an IRM year for which rates were set using the Board's formula under the 3<sup>rd</sup> Generation IRM, thus no rate base was calculated to determine rates.

DESCRIPTION	Bridge Year 2014
Mid Year Gross Plant	9,529.2
Mid Year Accumulated Depreciation	(3,553.3)
Mid Year Net Plant	5,975.9
Cash Working Capital	248.3
Materials and Supplies Inventory	6.4
Distribution Rate Base	6,230.5

**Association of Major Power Consumers in Ontario (AMPCO) INTERROGATORY #37**

**Issue 6.1 Is the rate base component of the revenue requirement for 2015 as set out in the Custom Application appropriate?**

**Interrogatory**

**Reference 1: EB-2009-0096 Exhibit D1/Tab 1/Schedule 1/Attachment 1/p.6**

**Reference 2: EB-2013-0416 Exhibit D1/Tab 1/Schedule 3/Attachment 1/p.6**

**Reference 3: Hydro One website indicates “CIS and the elimination of the customer billing delay”.**

**Preamble:** It is AMPCO’s understanding that part of the benefit of the new Customer Information System was to be the reduction or elimination of the 18 day billing delay, between when the bill is sent out and when payment is due. This is defined in the lead lag studies as a part of the collection delay.

In the Lead-Lag study prepared for EB-2009-0096, the average collection delay is identified as 32.07 days (Ref 1).

In the Lead-Lag study for EB-2013-0416, the average collection delay is identified as 28.77 days, a reduction from the previous study of only 3.3 days (Ref 2).

It does not appear that the Navigant Study includes consideration of the impact of the new CIS.

a) Please provide an estimate of the impact on working capital of the new CIS implementation, considering the elimination of the 18 day customer billing delay.

1 **Response**

2  
3 a) As indicated in Exhibit D1, Tab 1, Schedule 3, Attachment , p.6, a collection lag is the  
4 time period from when the customer's bill is provided to the customer, to the time  
5 period that the customer provides a payment to HONI and when that payment is  
6 recorded in HONI's billing system. A billing lag is the time period from when the  
7 customer's service period ends, which is typically defined as when the meter is read,  
8 and the time that the customer's bill is generated and provided to the customer.

9  
10 The new Customer Information System has an impact on billing lag which was  
11 considered as part of the Navigant Study. As a result the billing lag was reduced from  
12 19.12 days in 2010 (Ref 1) to 7.7 days in 2015 (Ref 2).

**Vulnerable Energy Consumers Coalition (VECC) INTERROGATORY #74**

**Issue 6.2 Is the capital structure and cost of capital component of the revenue requirement for 2015 as set out in the Custom Application appropriate?**

**Interrogatory**

**Reference: Exhibit A/Tab 3/Schedule 1/p.3 & Exhibit B1/Tab 1/Schedule 1**

- a) What is the rationale for adjusting equity returns during the plan period rather than embedding the 2014 rate of returns into rates for the 5 year period as might be done under an incentive rate plan?
- b) Please provide a similar explanation/rationale for the proposal to adjust short term and long-term debt during the plan

**Response**

- a) Hydro One believes that updating the cost of capital to reflect the most recent relevant data possible is appropriate because the new investments should earn returns that are consistent with the anticipated returns during the period of the investment.

This approach is consistent with the Board's Decisions on Hydro One's rate applications since 2009 including its last Distribution Cost of Service application EB-2009-0096 and its 2013 IRM application EB-2012-0136, as well as the recent Transmission Cost of Service applications EB-2010-0002, EB-2011-0268 and EB-2012-0031.

Particularly in its Decision with Reasons (filed under Attachment 1 of this exhibit) in Hydro One Transmission rate application EB-2010-0002, on Page 50, the Board stated:

"As a general rule the Board prefers that all rate decisions are informed by the most recent relevant data possible..."

In this Decision, supported by Board Staff and intervenors, the Board ordered Hydro One to update its ROE and Short Term Debt based on the parameters issued by the Board in November of the preceding year, to incorporate actual debt

- 1 issues and to update its long term debt forecasts to reflect and take account of
- 2 actual issuances of debt since the time of original application.
- 3
- 4 b) Please see response to part a) above.

**School Energy Coalition (SEC) INTERROGATORY #50**

**Issue 6.2**      **Is the capital structure and cost of capital component of the revenue requirement for 2015 as set out in the Custom Application appropriate?**

**Interrogatory**

**Reference: Exhibit B1**

Please provide a chart comparing the Applicant's actual regulated ROE (or forecasted for 2014) and it's approved ROE for each between 2009-2014.

**Response**

Please refer to the interrogatory response in Exhibit I, Tab 6.3, Schedule 6 VECC 76.

**School Energy Coalition (SEC) INTERROGATORY #51**

**Issue 6.2**      **Is the capital structure and cost of capital component of the revenue requirement for 2015 as set out in the Custom Application appropriate?**

**Interrogatory**

**Reference: Exhibit B1**

If during the term of the proposed Custom Application (2015-2019) the Board changes the deemed capital structure currently set out in the Report of the Board on the Cost of Capital for Ontario's Regulated Utilities, how does the Applicant propose to deal with that development for ratemaking purposes, if at all?

**Response**

If during the term of the proposed Custom Application (2015-2019) the Board changes the current deemed capital structure, Hydro One would implement any changes that the Board deems as appropriate to incorporate via the annual process of updating cost of capital parameters.



**School Energy Coalition (SEC) INTERROGATORY #52**

**Issue 6.2**      **Is the capital structure and cost of capital component of the revenue requirement for 2015 as set out in the Custom Application appropriate?**

**Interrogatory**

**Reference: Exhibit B1/Tab 1/Schedule 1/p.3**

Please provide a copy of the September 2013 Consensus Forecast.

**Response**

The requested report is provided as Attachment 1 to this response.

# CONSENSUS FORECASTS®

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**Survey Date**  
**September 9, 2013**

Every month, Consensus Economics surveys over 250 prominent financial and economic forecasters for their estimates of a range of variables including future growth, inflation, interest rates and exchange rates. More than 20 countries are covered and the reference data, together with analysis and polls on topical issues, is rushed to subscribers by express mail and e-mail.

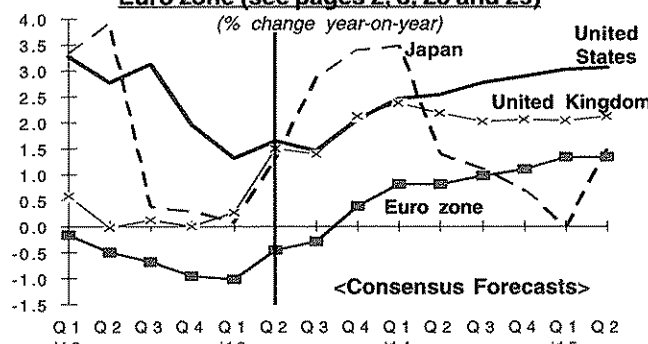
## Survey Highlights

- ◆ **US** growth forecasts for both 2013 and 2014 improved this month after Q2 GDP was upgraded from 1.7% (q-o-q annualized) to 2.5% in the second release of the national accounts. Elsewhere, broad-based recoveries in **Japan** and the **UK** gained momentum in Q2 with expansions of 1.3% (y-o-y) and 1.5%, respectively.
- ◆ The **Euro zone** finally exited recession in Q2 by registering 0.3% (q-o-q) GDP growth, and latest indicators from several economies within the single currency bloc suggest that the recovery could be maintained over the coming months. Business confidence in **Germany** surged last month to its highest level since April 2012, and an improving labour market in **Italy** has seen our panel upgrade its GDP forecasts in our latest survey (although output continues to decline).
- ◆ Our regular survey of **Quarterly Forecasts** (pages 3, 28 and 29) shows our panels' forecasts for **GDP growth, Consumption, Industrial Production, Inflation** and **3-month Interest Rates** through to Q2 2015. Moreover, our **Significant Changes** section (page 2) contrasts the **latest quarterly GDP growth expectations** with those from September 2012 and March 2013.

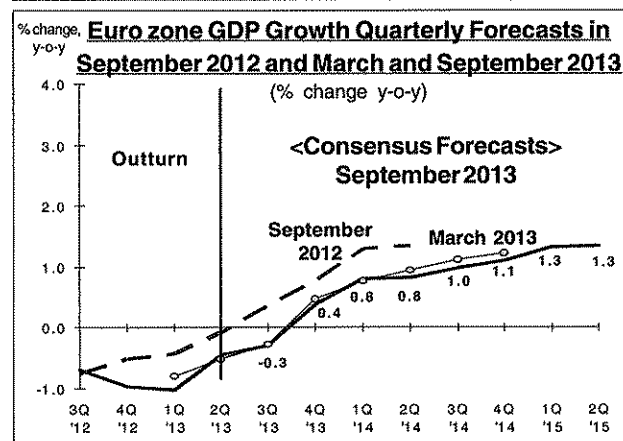
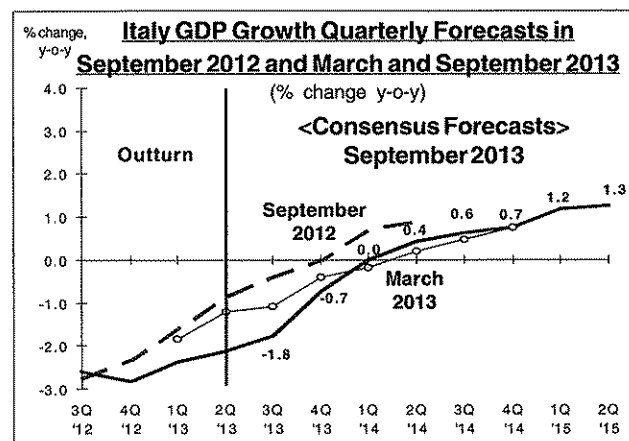
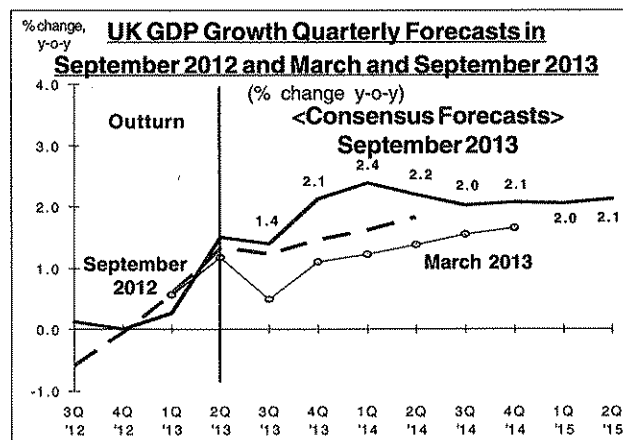
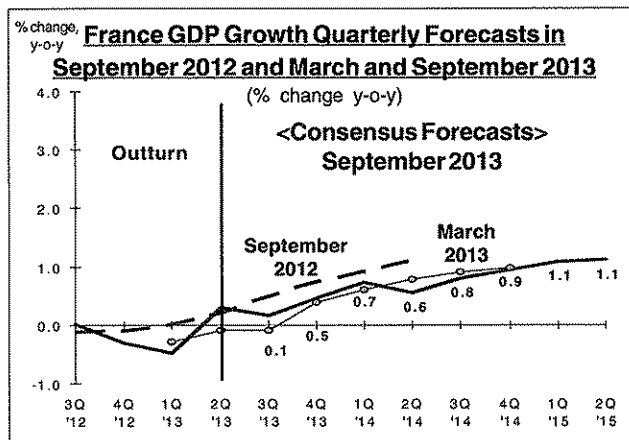
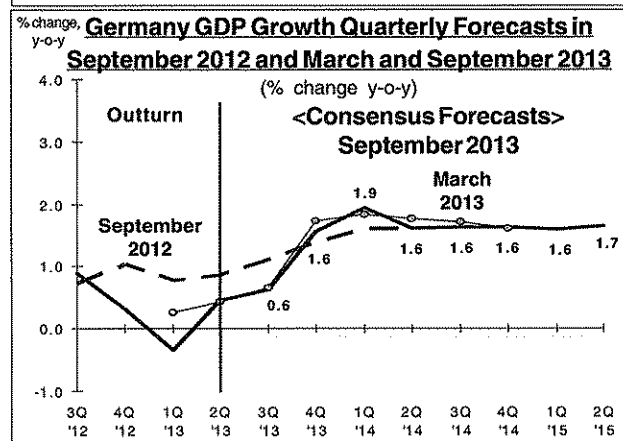
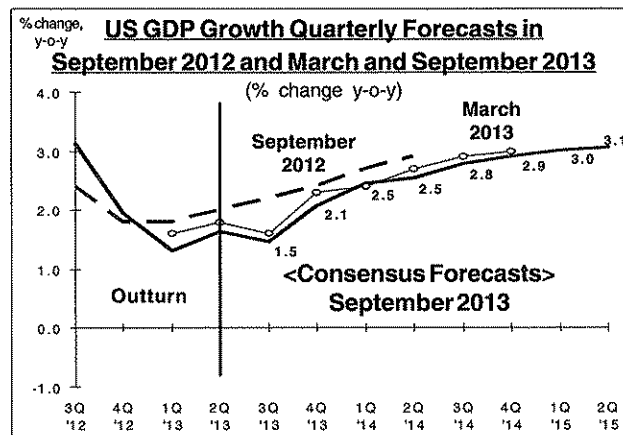
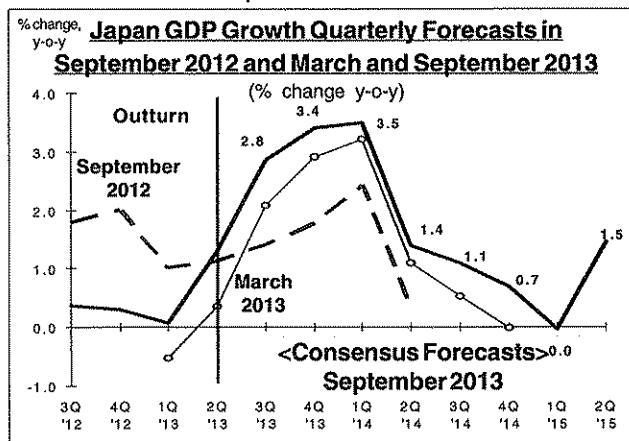
Our next issue of **Consensus Forecasts** will be available at the end of the day on **October 17, 2013** and will be a repeat of our regular survey of **Long-Term Forecasts**.

<b>Contents</b>	
	<b>Page</b>
<b>Significant Changes in the Consensus</b> .....	2
<b>Special Survey:</b> <b>Quarterly Forecasts</b> <b>(continued on page 28)</b> .....	3
<b>Individual Country Forecasts</b>	
United States .....	4
Japan .....	6
Germany .....	8
France .....	10
United Kingdom .....	12
Italy .....	14
Canada .....	16
Euro zone .....	18
Netherlands .....	20
Norway .....	21
Spain .....	22
Sweden .....	23
Switzerland .....	24
Austria, Belgium, Denmark, Egypt, Finland, Greece .....	25
Ireland, Israel, Nigeria, Portugal, Saudi Arabia, South Africa .....	26
<b>Foreign Exchange and Oil Price Forecasts</b> .....	27
<b>Special Survey:</b> <b>Quarterly Forecasts</b> <b>(continued from page 3)</b> .....	28-29
<b>World Economic Activity</b> .....	32

**Quarterly GDP Growth in the US, Japan, UK and the Euro zone (see pages 2, 3, 28 and 29)**



Changes in Quarterly Forecasts for GDP Growth among the G-6 and Euro zone contrasts September 2013 GDP consensus projections in blue (pages 3, 28 and 29) with those published in September 2012 and March 2013. Sentiment has improved for some on the back of upbeat Q2 GDP outturns. For the Euro area, an end to the region's drawn-out recession is in sight. German GDP advanced by 0.5% (y-o-y) while France pulled itself out of two straight quarters of decline. Italian GDP continued to tumble, albeit at a slower pace, but latest Italian and Euro zone quarterly forecasts are still undershooting those made one year ago. The progress of US GDP growth over the next few quarters could be somewhat rocky before it hits 3% in 2015. Japan and the UK are bucking the otherwise cautious trend on the back of better-than-expected news.



In addition to their regular forecasts, country panellists were asked to provide forecasts for individual quarters covering the period through to Q2 2015. Figures in normal type are official, published data with consensus forecasts—based on the averages of our panels' forecasts—shown in **bold italics**. Unless stated otherwise, all definitions correspond to those used on the individual country pages. As indicated, normal text numbers are percentage changes over the same quarter of the previous year; italics denote implied changes over the previous quarter (not annualised). Readers should note that the four quarterly consensus forecasts covering a year may not equate to the annual consensus forecast shown for that same variable on pages 4-24, since the groups of survey respondents may be different, or because of rounding.

United States												
* % change over previous year	2012		2013				2014				2015	
	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2
Gross Domestic Product*	3.1	2.0	1.3	1.6	<b>1.5</b>	<b>2.1</b>	<b>2.5</b>	<b>2.5</b>	<b>2.8</b>	<b>2.9</b>	<b>3.0</b>	<b>3.1</b>
% change, qtr/qtr	0.7	0.0	0.3	0.6	0.5	0.6	0.7	0.7	0.7	0.8	0.8	0.8
Personal Consumption*	2.2	2.0	1.9	1.8	<b>2.0</b>	<b>2.2</b>	<b>2.2</b>	<b>2.5</b>	<b>2.6</b>	<b>2.7</b>	<b>2.8</b>	<b>2.8</b>
% change, qtr/qtr	0.4	0.4	0.6	0.4	0.5	0.6	0.6	0.7	0.7	0.7	0.7	0.7
Industrial Production*	3.3	2.8	2.4	1.8	<b>2.3</b>	<b>2.5</b>	<b>2.3</b>	<b>3.0</b>	<b>3.3</b>	<b>3.4</b>	<b>3.6</b>	<b>3.7</b>
Consumer Prices*	1.7	1.9	1.7	1.4	<b>1.6</b>	<b>1.5</b>	<b>1.6</b>	<b>2.1</b>	<b>1.9</b>	<b>1.9</b>	<b>2.0</b>	<b>2.1</b>
3 month Treasury Bill Rate, % <sup>1</sup>	0.1	0.1	0.1	0.0	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>0.2</b>	<b>0.3</b>	<b>0.4</b>

<sup>1</sup> End period

Q2 GDP data for many **G-7 and Western European countries** turned out to be better than expected, thanks in large part to the **Euro area** finally exiting (in q-o-q terms) its long recession. This has helped to brighten the outlook for many European economies both inside and out of the currency bloc. The **German** economy managed to avoid falling into the outright recession which affected the rest of the **Euro area** and has continued growing despite hiccups in the last two quarters. The 0.7% (q-o-q) acceleration in Q2 **German** growth was boosted by robust consumer spending and a rebound in investment, owing to near record-low unemployment and an upturn in business confidence. **French** GDP, meanwhile, exited its shallow recession by a not-inconsiderable 0.5% (q-o-q), and the **Euro zone** as a whole finally saw a chink of light after six consecutive quarters of contraction. Still, the upturn

projected over the next few quarters for most **Euro bloc** economies remains extremely muted, not surprising given the collapse in output levels since 2008. Not even **Germany** is expected to expand above 2% (y-o-y) growth by Q2 2015. By contrast, quarterly GDP forecasts for the **United Kingdom** show the recovery accelerating over 2% (y-o-y) by the end of 2013 as the dominant services sector and a recovery in exports spur activity. Elsewhere, the **United States** recovery also picked up pace in Q2 and while growth this year remains hemmed in by fiscal pressures primarily, GDP growth should eventually reach its 3% potential by Q1 2015. **Japan** is expected to surpass that growth rate much sooner, by Q4 2013, but this is forecast to be temporary before activity decelerates noticeably on the back of a consumption tax hike next April.

Tables continued on page 28 and 29

Japan												
* % change over previous year	2012		2013				2014				2015	
	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2
Gross Domestic Product*	0.4	0.3	0.1	1.3	<b>2.8</b>	<b>3.4</b>	<b>3.5</b>	<b>1.4</b>	<b>1.1</b>	<b>0.7</b>	<b>0.0</b>	<b>1.5</b>
% change, qtr/qtr	-0.9	0.3	1.0	0.9	0.6	0.8	1.1	-1.1	0.3	0.4	0.4	0.4
Private Consumption*	1.3	1.1	1.1	1.7	<b>2.3</b>	<b>2.3</b>	<b>2.9</b>	<b>-0.3</b>	<b>-0.1</b>	<b>-0.3</b>	<b>-1.5</b>	<b>1.3</b>
% change, qtr/qtr	-0.4	0.5	0.8	0.7	0.2	0.5	1.4	-2.4	0.4	0.4	0.2	0.4
Industrial Production*	-3.6	-6.4	-6.5	-3.0	<b>2.4</b>	<b>6.2</b>	<b>7.5</b>	<b>4.5</b>	<b>2.8</b>	<b>1.8</b>	<b>0.6</b>	<b>3.0</b>
Consumer Prices*	-0.4	-0.2	-0.6	-0.2	<b>0.5</b>	<b>0.7</b>	<b>0.9</b>	<b>2.8</b>	<b>2.7</b>	<b>2.6</b>	<b>2.8</b>	<b>0.6</b>
3 month Yen (TIBOR) rate, % <sup>1</sup>	0.3	0.3	0.3	0.2	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>

<sup>1</sup> End period

Germany												
* % change over previous year	2012		2013				2014				2015	
	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2
Gross Domestic Product* <sup>2</sup>	0.9	0.3	-0.3	0.5	<b>0.6</b>	<b>1.6</b>	<b>1.9</b>	<b>1.6</b>	<b>1.6</b>	<b>1.6</b>	<b>1.6</b>	<b>1.7</b>
% change, qtr/qtr	0.2	-0.5	0.0	0.7	0.4	0.5	0.4	0.4	0.4	0.5	0.3	0.5
Private Consumption* <sup>2</sup>	0.4	0.3	0.6	1.1	<b>1.1</b>	<b>1.5</b>	<b>1.5</b>	<b>1.3</b>	<b>1.3</b>	<b>1.3</b>	<b>1.2</b>	<b>1.2</b>
% change, qtr/qtr	0.3	0.1	0.2	0.5	0.3	0.4	0.3	0.3	0.3	0.4	0.1	0.3
Industrial Production*	-0.7	-2.3	-2.4	-0.8	<b>0.3</b>	<b>4.1</b>	<b>4.6</b>	<b>3.4</b>	<b>3.4</b>	<b>2.5</b>	<b>2.6</b>	<b>2.5</b>
Consumer Prices*	2.1	1.9	1.5	1.5	<b>1.7</b>	<b>1.7</b>	<b>1.8</b>	<b>2.0</b>	<b>1.9</b>	<b>2.0</b>	<b>1.9</b>	<b>2.0</b>
3 month Euro Rate, % <sup>1</sup>	0.2	0.2	0.2	0.2	<b>0.2</b>	<b>0.3</b>	<b>0.3</b>	<b>0.4</b>	<b>0.4</b>	<b>0.5</b>	<b>0.7</b>	<b>1.0</b>

<sup>1</sup> End period <sup>2</sup> Quarterly data (source: Bundesbank) are working-day adjusted. Annual figures on page 8 (source: FSO) are not adjusted.

## UNITED STATES

SEPTEMBER 2013

	Average % Change on Previous Calendar Year														Annual Total					
	Gross Domestic Product		Personal Consumption		Business Investment		Pre - Tax Corporate Profits		Industrial Production		Consumer Prices		Producer Prices		Employment Costs		Auto & Light Truck Sales (inc. imports, mn units)		Housing Starts (mn units)	
Economic Forecasters	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014
American Int'l Group	1.8	2.7	2.3	3.3	3.9	3.4	1.4	2.1	2.5	3.6	1.6	1.5	0.9	0.5	na	na	15.5	16.0	1.00	1.35
Ford Motor Company	1.8	3.0	2.4	3.0	3.2	4.1	na	na	3.0	5.0	1.6	1.8	1.4	1.3	na	na	na	na	1.01	1.30
Moody's Analytics	1.8	3.3	2.1	3.5	4.2	6.8	3.2	5.7	2.2	1.7	1.5	1.9	1.6	1.4	1.9	2.2	15.5	16.6	1.03	1.64
General Motors	1.7	2.8	2.0	3.0	2.3	2.7	3.1	2.0	2.1	1.3	1.6	1.6	1.4	0.6	na	na	na	na	0.94	1.24
UBS	1.7	3.0	1.9	2.5	2.7	6.4	na	na	2.4	3.4	1.5	1.8	1.2	1.3	1.9	2.0	na	na	0.95	1.15
Inforum - Univ of Maryland	1.7	2.8	2.0	2.6	3.3	6.1	3.5	5.1	2.5	3.4	1.5	2.1	1.4	2.7	na	na	15.5	16.0	0.98	1.18
Standard & Poor's	1.7	2.9	2.1	2.8	3.2	6.9	1.6	3.7	2.3	2.9	1.5	1.5	1.2	0.4	1.9	2.5	15.6	16.1	0.94	1.23
JP Morgan	1.7	2.5	1.9	2.2	2.8	6.0	4.8	6.6	2.2	2.5	1.6	1.9	1.5	2.1	2.0	2.4	15.4	15.7	0.95	1.18
PNC Financial Services	1.6	2.5	2.0	2.2	2.6	3.9	na	na	2.3	3.1	1.6	2.2	1.3	1.8	na	na	15.6	16.0	0.93	1.02
The Conference Board	1.6	2.8	1.9	2.4	2.6	5.4	2.3	7.5	2.3	3.3	1.6	1.9	1.3	2.8	na	na	15.5	15.8	0.98	1.25
Action Economics	1.6	2.4	1.9	2.2	2.4	4.0	4.6	6.4	2.1	2.4	1.6	2.2	1.4	3.0	1.9	2.0	15.6	16.7	0.95	1.18
Bank of America - Merrill	1.6	2.8	2.0	2.5	2.6	6.1	na	na	2.1	3.1	1.5	1.5	na	na	na	na	15.6	16.4	0.95	1.20
DuPont	1.6	2.6	1.9	2.4	2.6	4.8	5.0	6.0	2.3	3.0	1.5	1.5	1.2	1.5	2.0	2.0	15.4	15.8	0.96	1.20
Econ Intelligence Unit	1.6	2.6	1.9	2.2	na	na	na	na	2.5	3.2	1.5	2.2	1.3	2.9	na	na	na	na	na	na
Fannie Mae	1.6	2.5	2.0	2.4	2.3	3.6	2.9	3.6	2.0	2.3	1.6	1.7	1.4	0.6	na	na	15.5	15.6	0.93	1.21
First Trust Advisors	1.6	2.7	2.0	2.8	2.4	4.3	na	na	2.0	1.9	1.6	2.4	1.4	1.8	na	na	15.7	16.0	0.93	1.10
Morgan Stanley	1.6	2.7	2.0	2.5	2.3	6.1	4.8	4.3	2.2	2.9	1.6	1.4	1.3	0.3	na	na	15.7	16.8	0.94	1.14
RDQ Economics	1.6	2.5	1.9	2.0	2.8	5.9	4.5	5.5	2.2	2.6	1.6	2.2	na	na	na	na	15.7	16.0	0.90	1.20
Wells Capital Mgmt	1.6	2.6	2.0	2.3	3.0	7.6	2.7	3.2	2.2	2.9	1.6	2.2	1.4	2.8	1.9	2.0	15.6	16.1	0.91	0.96
Wells Fargo	1.6	2.3	1.9	2.3	2.7	4.7	4.6	5.3	2.3	3.8	1.5	2.1	1.5	2.5	1.9	2.3	15.6	16.1	0.96	1.14
Northern Trust	1.6	2.7	1.9	2.6	2.7	4.9	na	na	na	na	1.5	1.9	na	na	na	na	15.6	15.8	0.92	1.02
IHS Global Insight	1.6	2.6	1.9	2.5	2.6	5.6	3.2	4.1	2.3	2.9	1.5	1.5	1.2	0.6	1.9	2.4	15.5	15.9	0.94	1.21
Barclays Capital	1.6	2.3	1.9	2.4	2.8	6.3	4.8	6.6	2.4	4.3	1.7	2.2	1.6	na	na	na	na	na	0.95	1.23
Credit Suisse	1.6	2.6	1.9	2.4	2.8	5.7	4.2	5.1	2.3	3.4	1.6	1.7	na	na	na	na	na	na	1.00	1.18
Goldman Sachs	1.6	2.9	1.9	2.4	3.0	7.7	na	na	2.2	3.3	1.6	1.8	na	na	na	na	na	na	0.95	1.18
Eaton Corporation	1.5	2.4	1.9	2.3	2.4	3.9	5.4	9.0	2.3	3.3	1.6	2.3	1.6	1.1	1.8	2.3	15.6	16.1	0.94	1.16
Nat Assn of Home Builders	1.5	2.7	1.9	2.6	2.3	3.2	na	na	2.1	2.4	1.4	1.7	1.0	1.0	1.8	1.6	15.5	15.8	0.92	1.15
Swiss Re	1.5	3.0	2.0	2.6	2.8	6.1	4.8	7.5	2.2	2.7	1.6	2.2	1.2	0.9	na	na	15.6	16.1	0.94	1.28
Georgia State University	1.5	2.2	1.9	2.1	2.6	5.0	2.0	4.3	2.5	2.7	1.4	1.7	0.8	0.7	2.0	2.4	15.3	15.3	0.96	1.14
Consensus (Mean)	1.6	2.7	2.0	2.5	2.8	5.3	3.7	5.2	2.3	3.0	1.5	1.9	1.3	1.5	1.9	2.2	15.6	16.0	0.95	1.19
Last Month's Mean	1.5	2.6	2.0	2.5	2.8	5.1	2.5	4.9	2.5	3.3	1.5	1.9	1.3	1.7	1.8	2.1	15.4	15.9	0.97	1.21
3 Months Ago	1.9	2.7	2.3	2.6	4.7	6.0	2.3	5.0	2.9	3.6	1.5	1.9	1.2	1.6	1.8	2.1	15.3	15.8	1.01	1.25
High	1.8	3.3	2.4	3.5	4.2	7.7	5.4	9.0	3.0	5.0	1.7	2.4	1.6	3.0	2.0	2.5	15.7	16.8	1.03	1.64
Low	1.5	2.2	1.9	2.0	2.3	2.7	1.4	2.0	2.0	1.3	1.4	1.4	0.8	0.3	1.8	1.6	15.3	15.3	0.90	0.96
Standard Deviation	0.1	0.2	0.1	0.3	0.5	1.3	1.2	1.8	0.2	0.7	0.1	0.3	0.2	0.9	0.1	0.3	0.1	0.4	0.03	0.12
Comparison Forecasts																				
CBO (Feb. '13)	1.4	2.6									1.6	1.9			2.1	2.9				
OMB (July '13)	2.0	3.1									1.4	1.9								
IMF (July '13)	1.7	2.7																		
OECD (May '13)	1.9	2.8	2.1	2.7	5.1	7.8					1.6	1.9								

## Government and Background Data

**President** - Mr. Barack Obama (Democrat). **Congress** - Republicans have a majority with 233 seats in the House of Representatives (lower house) while the Democrats have a 2-seat majority in the Senate (upper house). **Next Elections** - November 4, 2014 (Congressional); November 8, 2016 (Presidential and Congressional). **Nominal GDP** - US\$15,684bn (2012). **Population** - 317.5mn (mid-year, 2012).

## Quarterly Consensus Forecasts

*Historical Data and Forecasts (bold italics) From Survey of September 9, 2013*

	2013				2014				2015			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Gross Domestic Product	1.3	1.6	1.5	2.1	2.5	2.5	2.8	2.9	3.0	3.1		
Personal Consumption	1.9	1.8	2.0	2.2	2.2	2.5	2.6	2.7	2.8	2.8		
Consumer Prices	1.7	1.4	1.6	1.5	1.6	2.1	1.9	1.9	2.0	2.1		

*Percentage Change (year-on-year).*

## Historical Data

\* % change on previous year

	2009	2010	2011	2012
Gross Domestic Product*	-2.8	2.5	1.8	2.8
Personal Consumption*	-1.6	2.0	2.5	2.2
Business Investment*	-15.6	2.5	7.6	7.3
Pre - Tax Corporate Profits*	8.4	25.0	7.9	7.0
Industrial Production*	-11.3	5.7	3.4	3.6
Consumer Prices*	-0.3	1.6	3.1	2.1
Producer Prices*	-2.5	4.2	6.0	1.9
Employment Costs*	1.7	1.9	2.0	1.9
Auto & Light Truck Sales (inc. imports), mn	10.4	11.6	12.7	14.4
Housing Starts, mn	0.55	0.59	0.61	0.78
Unemployment Rate, %	9.3	9.6	9.0	8.1
Current Account, US\$ bn	-382	-442	-458	-440
Federal Budget Balance, fiscal years, US\$ bn	-1413	-1293	-1296	-1087
3 mth Treasury Bill, % (end yr)	0.1	0.2	0.0	0.1
10 Year Trsy Bond, % (end yr)	3.8	3.4	1.9	1.8

Year Average		Annual Total		Fiscal Years (Oct-Sep)		Rates on Survey Date			
						0.0%		2.9%	
Unemployment Rate (%)		Current Account (US\$ bn)		Federal Budget Balance (US\$ bn)		3 month Treasury Bill Rate (%)		10 Year Treasury Bond Yield (%)	
2013	2014	2013	2014	FY 12-13	FY 13-14	End Dec'13	End Sep'14	End Dec'13	End Sep'14
7.5	7.0	na	na	-651	-659	0.1	0.4	2.6	3.3
7.4	6.8	na	na	-558	-782	0.1	0.1	2.5	3.0
7.5	6.9	-470	-630	-772	-860	0.1	0.2	2.4	3.4
7.5	7.0	-410	-462	-623	-830	0.1	0.1	3.0	3.3
7.4	6.7	-388	-321	-670	-595	0.1	0.1	2.5	2.8
7.5	7.0	na	na	na	na	0.2	0.3	2.4	2.9
7.5	7.1	-392	-395	na	na	0.1	0.1	2.3	2.7
7.5	7.0	-459	-558	-650	-575	na	na	na	na
7.4	6.7	na	na	na	na	0.1	0.3	2.8	3.4
7.5	7.0	-453	-489	na	na	0.1	0.1	3.0	3.4
7.5	7.1	-384	-329	-690	-580	0.1	0.2	3.5	4.2
7.4	6.8	-394	-462	-650	-550	0.0	0.1	3.0	3.8
7.5	7.1	na	na	-700	-600	0.1	0.1	2.9	3.5
7.4	6.9	-360	-375	-669	-538	0.0	0.0	3.0	3.4
7.5	6.9	-409	-455	-623	-843	0.1	0.2	3.0	3.2
7.4	6.7	-411	-416	-640	-500	0.1	0.1	3.1	3.6
7.5	6.9	-435	-469	-676	-570	na	na	2.8	3.5
7.5	6.8	na	na	-700	na	0.1	0.1	2.8	3.5
7.5	6.9	-444	-483	-700	-640	0.1	0.3	2.9	3.2
7.5	7.2	-431	-415	-760	-750	0.2	0.2	3.1	3.2
7.5	7.0	na	na	na	na	0.1	0.1	2.9	3.2
7.6	7.1	-388	-398	-699	-742	0.1	0.1	2.8	3.0
7.4	6.7	-432	-458	-650	-550	0.1	na	3.1	3.8
7.5	6.9	-486	-489	-642	-632	na	na	3.0	3.4
7.5	6.9	-408	-454	-650	-600	0.1	0.1	2.8	3.2
7.6	7.2	na	na	-675	-625	0.0	0.1	3.0	3.2
7.5	7.2	-375	-379	-672	-662	0.0	0.1	2.7	3.2
7.5	6.9	-427	-448	-575	-160	0.1	0.1	2.7	2.9
7.5	7.3	-445	-418	-768	-668	0.1	0.1	2.9	3.5
7.5	7.0	-419	-443	-669	-631	0.1	0.2	2.8	3.3
7.5	7.0	-437	-462	-663	-623				
7.5	7.1	-451	-474	-717	-631				
7.6	7.3	-360	-321	-558	-160	0.2	0.4	3.5	4.2
7.4	6.7	-486	-630	-772	-860	0.0	0.0	2.3	2.7
0.1	0.2	33	70	52	145	0.0	0.1	0.3	0.3
7.9	7.8			-845	-616				
7.5	7.0			-759	-750				
7.5	7.0								

### GDP Forecasts Rise on Back of Q2 Upgrade

A small uptick in the 2013 and 2014 GDP outlook has accompanied the second release of the Q2 national accounts. The report showed an upside revision to the initial GDP outturn of 1.7% (q-o-q annualized) growth to 2.5%, more than double the first quarter's 1.1% pace. Activity was supported in part by an 8.6% annualized surge in real exports, up from a 1.3% decline in Q1, which helped to ease some concerns about slowing external conditions. Corporate profits soared by a massive +16.4% in stark contrast to the 5.1% contraction recorded in the March quarter, in turn giving impetus to our panel's forecasts for the variable. The Q2 contribution to GDP from inventories was larger than initially announced, although going forward, this could suggest that firms – having built up sufficient stockpiles – will now start to wind them down. Consumer activity is also looking subdued: after easing from an 2.3% (q-o-q annualized) advance in Q1 to 1.9% in Q2, monthly real personal consumption was flat m-o-m in July following a 0.2% rise in June. Elsewhere, July was a muted month for retail sales which slowed from 0.6% (m-o-m) in June to 0.2%. The outlook for consumption is not completely downbeat, however. August non-farm business payrolls hit 169,000, although strong gains in payrolls recorded in previous months were sharply revised down. Still, speculation that the Fed could taper quantitative easing at its September 17-18 meeting remains rife.

After flat industrial production in July, August's ISM manufacturing survey was robust. Even July's widening trade deficit – due to a US\$12.5bn surge in auto imports – derived from US-owned plants in Canada and Mexico. Regardless, this has not stopped production expectations from faltering this month.

### US Interest Rates (in %)

	Fed funds	----- US Treasury 2-year	----- securities <sup>1</sup> 10-year	----- 30-year
<b>Sep. 9, 2013</b>	0.08%	0.45%	2.90%	3.84%
<b>1 month ago <sup>2</sup></b>	0.08%	0.32%	2.61%	3.67%
<b>6 months ago <sup>2</sup></b>	0.16%	0.27%	2.07%	3.26%
<b>12 months ago <sup>2</sup></b>	0.15%	0.25%	1.68%	2.83%

<sup>1</sup> Nominal Treasury constant maturities. <sup>2</sup> On survey date.

### Direction of Trade – 2012

#### Major Export Markets (% of Total)

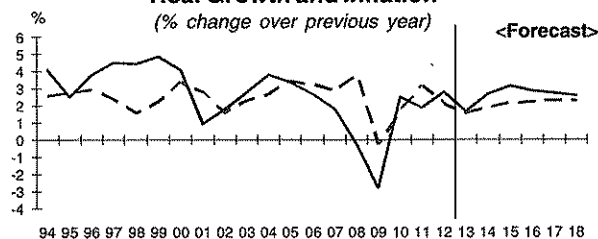
Canada	18.9
Mexico	14.0
China	7.2
Latin America	25.8
EU	17.2
Asia (ex. Japan)	11.8

#### Major Import Suppliers (% of Total)

China	19.0
Canada	14.1
Mexico	12.0
Asia (ex. Japan)	25.9
Latin America	19.6
EU	16.7

### Real Growth and Inflation

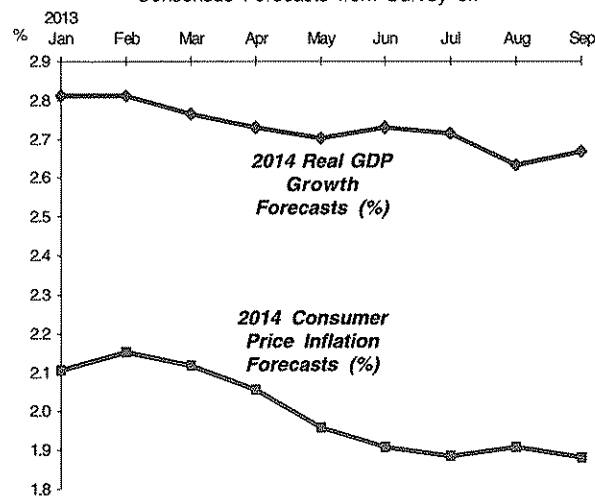
(% change over previous year)



94 95 96 97 98 99 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18  
 — Real GDP (% chg yoy) — — — Consumer Prices (% chg yoy)

### 2014 GDP Growth and Inflation Forecasts

Consensus Forecasts from Survey of:



	Average % Change on Previous Calendar Year												Annual Total					
	Gross Domestic Product		Private Consumption		Business Investment		Industrial Production		Consumer Prices		Domestic Corporate Goods Prices		Total Cash Earnings (nominal)		New Car Registrations (mn)		Housing Starts (mn)	
	国内総生産		民間消費		民間設備投資		鉱工業生産		消費者物価		卸売物価		現金給与総額 (名目)		新車登録台数 (百万台)		新設住宅着工 (百万戸)	
Economic Forecasters	2013 2014		2013 2014		2013 2014		2013 2014		2013 2014		2013 2014		2013 2014		2013 2014		2013 2014	
Nippon Steel & Sumikin Rsrch	2.4	2.1	1.8	1.5	0.5	5.6	-0.7	3.8	-0.1	1.7	1.0	2.1	0.9	2.9	2.7	2.4	0.97	0.83
Credit Suisse	2.1	1.8	1.9	0.8	-0.6	3.3	-0.3	3.8	0.3	2.4	na	na	na	na	na	na	na	na
Daiwa Institute of Research	2.1	2.0	1.9	0.3	-0.9	6.0	-0.5	6.8	0.3	2.4	1.0	3.0	na	na	na	na	na	na
Mizuho Securities	2.1	2.0	1.8	0.3	0.3	8.3	0.5	6.3	0.0	2.3	1.0	2.0	0.5	1.0	na	na	0.97	0.92
Citigroup Japan	2.0	2.0	2.0	0.6	-2.1	4.1	-0.4	3.5	0.0	2.1	na	na	na	na	na	na	na	na
Nomura Securities	2.0	2.6	1.9	1.3	-1.0	6.2	-0.2	6.1	0.2	2.3	1.1	3.6	na	na	na	na	na	na
Mizuho Research Institute	2.0	1.6	2.0	0.3	-0.7	4.3	-0.2	3.3	0.2	2.1	1.3	3.0	0.1	0.3	na	na	0.97	0.90
ITOCHU Institute	1.9	1.5	1.9	0.2	-1.1	3.6	-0.3	3.6	0.1	2.4	1.3	3.4	0.2	0.0	2.8	2.3	0.97	0.86
Mitsubishi Research Institute	1.9	1.4	1.8	0.7	-1.1	4.4	-0.6	4.4	0.3	2.2	1.3	3.8	na	na	na	na	0.95	0.87
Japan Ctr for Econ Research	1.9	1.1	1.7	0.2	-0.7	4.1	-0.6	3.0	0.0	2.0	2.4	4.1	0.1	0.3	na	na	0.98	0.85
Bank of Tokyo-Mitsubishi UFJ	1.8	1.9	1.9	0.7	-2.0	5.6	-0.1	4.8	0.3	2.8	1.1	4.3	na	na	na	na	na	na
Goldman Sachs	1.8	1.6	1.9	0.7	-2.4	1.3	-0.6	3.3	0.1	2.3	1.4	3.5	na	na	na	na	na	na
NLI Research Institute	1.8	1.2	1.9	0.3	-1.8	2.6	-0.5	2.8	0.3	2.4	1.2	3.3	0.1	1.4	na	na	0.98	0.84
Toyota Motor Corporation	1.8	1.3	1.9	-0.3	-2.1	2.7	na	na	na	na	na	na	na	na	2.8	2.5	na	na
Econ Intelligence Unit	1.7	2.1	2.0	0.6	na	na	0.0	3.4	0.1	1.7	1.2	1.9	na	na	4.3	4.1	na	na
UBS	1.7	1.5	1.8	0.5	-1.4	1.1	-1.2	4.7	0.0	2.1	na	na	na	na	na	na	na	na
IHS Global Insight	1.7	1.9	1.8	1.9	-1.1	6.8	-0.6	6.1	0.2	2.7	1.0	2.6	na	na	na	na	0.96	0.96
Deutsche Securities	1.6	0.9	2.0	-0.1	-2.9	0.4	0.2	4.6	0.1	2.5	0.6	4.8	0.7	2.0	na	na	0.94	0.90
HSBC	1.6	0.9	1.8	0.1	1.8	1.0	-1.4	3.6	0.1	1.8	0.6	0.8	na	na	na	na	na	na
Consensus (Mean)	1.9	1.7	1.9	0.6	-1.1	4.0	-0.4	4.3	0.1	2.2	1.2	3.1	0.4	1.1	3.2	2.8	0.96	0.88
Last Month's Mean	1.9	1.5	1.8	0.5	-1.2	4.1	-0.2	4.1	0.1	2.1	1.1	2.7	0.0	0.4	3.3	3.0	0.96	0.90
3 Months Ago	1.9	1.5	1.6	0.5	-1.4	4.3	0.6	3.9	0.0	2.1	1.0	2.7	0.3	1.0	3.1	2.9	0.95	0.90
High	2.4	2.6	2.0	1.9	1.8	8.3	0.5	6.8	0.3	2.8	2.4	4.8	0.9	2.9	4.3	4.1	0.98	0.96
Low	1.6	0.9	1.7	-0.3	-2.9	0.4	-1.4	2.8	-0.1	1.7	0.6	0.8	0.1	0.0	2.7	2.3	0.94	0.83
Standard Deviation	0.2	0.4	0.1	0.5	1.1	2.2	0.5	1.2	0.1	0.3	0.4	1.1	0.3	1.0	0.7	0.9	0.01	0.04
Comparison Forecasts																		
IMF (Jul. '13)	2.0	1.2																
OECD (May. '13)	1.6	1.4	1.6	1.0					-0.1	1.8								

## Government and Background Data

Prime Minister - Mr. Shinzo Abe of the Liberal Democratic Party of Japan (LDP) was elected as Prime Minister in December 2012. **Parliament** - President Abe's LDP won 294 of the 480 seats of the Lower House of Parliament and has formed a coalition with the minority party New Komeito Party. **Next Elections** - 2016 (parliamentary). **Nominal GDP** - ¥475.9tn (2012). **Population** - 127.3mn (mid-year, 2012). **Yen/\$ Exchange Rate** - 79.80 (average, 2012).

## Quarterly Consensus Forecasts

Historical Data and Forecasts (bold italics) From Survey of September 9, 2013

	2013				2014				2015			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Gross Domestic Product	0.1	1.3	2.8	3.4	3.5	1.4	1.1	0.7	0.0	1.5		
Private Consumption	1.1	1.7	2.3	2.3	2.9	-0.3	-0.1	-0.3	-1.5	1.3		
Consumer Prices	-0.6	-0.2	0.5	0.7	0.9	2.8	2.7	2.6	2.8	0.6		

Percentage Change (year-on-year).

## Historical Data

* % change on previous year	2009	2010	2011	2012
Gross Domestic Product*	-5.5	4.7	-0.6	2.0
Private Consumption*	-0.7	2.8	0.5	2.4
Business Investment*	-14.2	0.7	3.3	1.8
Industrial Production*	-21.6	15.6	-2.6	0.2
Consumer Prices*	-1.3	-0.7	-0.3	0.0
Domestic Corporate Goods Prices*	-5.3	-0.1	1.5	-0.9
Total Cash Earnings (nominal)*	-4.0	0.5	-0.2	-0.6
New Car Registrations, mn	2.6	2.9	2.4	3.0
Housing Starts, mn	0.79	0.81	0.83	0.88
Unemployment Rate, %	5.1	5.1	4.6	4.4
Current Account, ¥tn	13.7	17.9	9.6	4.8
General Govt Budget Balance, SNA basis, fisc. years, ¥tn	-42.9	-40.4	-42.3	-46.7 e
3 mth TIBOR, % (end yr)	0.5	0.3	0.3	0.3
10 Yr Govt Bond, % (end yr)	1.3	1.1	1.0	0.8

e = consensus estimate based on latest survey

Year Average	Annual Total	Fiscal Years (Apr-Mar)		Rates on Survey Date			
				0.2%		0.8%	
Unemployment Rate (%)	Current Account (¥tn)	General Government Budget Balance (¥tn)		3 month Yen TIBOR Rate(%)		10 Year Govt Bond Yield (%)	
失業率	経常収支	一般政府財政収支 (SNA ベース、兆円)		3ヵ月物 円建 譲渡性預金		10年物 国債利回り	
2013 2014	2013 2014	FY 13-14	FY 14-15	End Dec'13	End Sep'14	End Dec'13	End Sep'14
3.9	2.8	4.1	10.0	na	na	0.2	0.2
3.9	3.4	5.7	3.3	na	na	0.2	0.2
4.1	3.9	7.3	12.2	na	na	0.2	0.2
4.0	3.6	6.7	8.4	na	na	0.2	0.2
4.0	3.7	7.4	12.6	-47.3	-39.7	na	na
4.0	3.8	5.1	7.6	-45.8	-40.8	na	na
4.0	3.7	5.1	9.1	na	na	0.2	0.2
4.0	3.8	5.7	9.3	-46.2	-42.6	0.3	0.3
4.0	3.9	5.1	6.2	na	na	na	na
4.0	3.9	5.3	7.3	-43.1	-35.7	na	na
na	na	6.8	10.9	na	na	0.2	0.2
3.8	3.6	4.2	6.0	na	na	na	na
3.9	3.8	6.9	8.8	-43.3	-40.3	0.2	0.2
na	na	na	na	na	na	na	na
4.0	3.3	na	na	na	na	na	na
4.0	3.8	na	na	na	na	0.2	0.2
4.0	3.9	6.2	4.2	na	na	0.2	0.2
4.0	3.9	7.4	13.7	-43.9	-33.6	0.2	0.2
4.1	3.9	6.8	8.1	-43.9	-35.9	0.2	0.2
4.0	3.7	6.0	8.6	-44.8	-38.4	0.2	0.2
4.0	3.8	5.5	8.1	-42.5	-36.6		
4.0	3.8	4.8	7.9	-43.3	-36.2		
4.1	3.9	7.4	13.7	-43.1	-33.6	0.3	0.3
3.8	2.8	4.1	3.3	-47.3	-42.6	0.2	0.2
0.1	0.3	1.1	2.9	1.6	3.3	0.0	0.0
4.2	4.1						

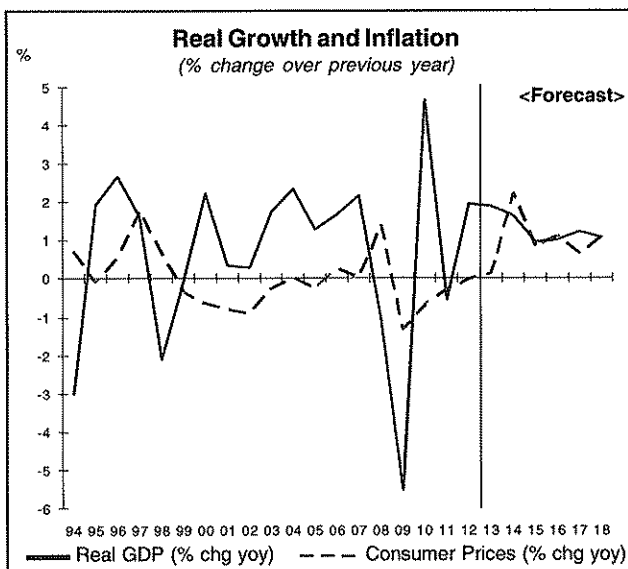
### Positive Data Boost Case for Tax Hike

The final release of Q2 GDP (on our deadline) indicated that a solid economic recovery is taking hold, after the preliminary figure of 0.6% (q-o-q) was revised up to 0.9%. On a y-o-y basis, GDP growth improved to 1.3% from the previous estimate of 0.9%, reinforcing the case for Prime Minister Abe to go ahead with next year's planned consumption tax hike – a move necessary to cut Japan's soaring public debt. The final GDP release came after the September 5 monetary policy meeting where the Bank of Japan governor signalled his support for the tax increase. He deemed the economy to be "recovering moderately" and hinted at the prospect of further monetary easing should the VAT hike weigh on prices and economic activity. The day after the meeting, the government upgraded its overall economic view thanks to strong manufacturing-related numbers. Industrial output rose 3.2% (m-o-m) in July following a similarly sized decline in June (-3.1%), while the purchasing manager's survey for August manufacturing improved to 52.2 from 50.7 in July. Other monthly economic indicators proved more disappointing, though. July retail sales dropped 1.8% (m-o-m) after a 0.2% decline the month before, although bad weather and fewer calendar days may have affected the outturn, too. In addition, an improvement in the labour market (July unemployment stood at 3.8%, the lowest since October 2008) and an increase in summer bonuses should support consumption. With these data releases in mind, the prime minister is due to finalise his decision on the tax hike next month.

Total core CPI accelerated at its fastest pace since November 2008 in July to 0.7% (y-o-y), although our panel has left its 2013 forecast for overall inflation unchanged at +0.1%.

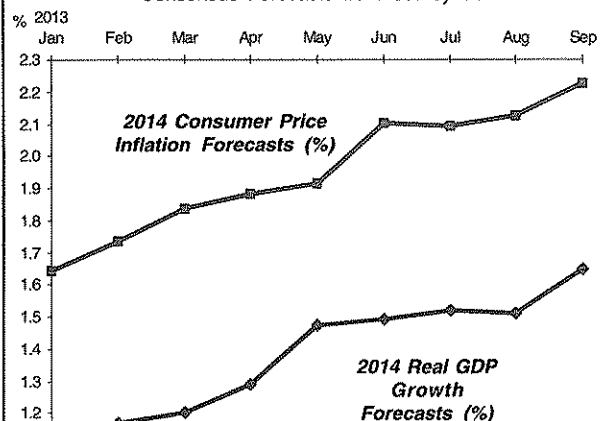
### Direction of Trade – 2012

Major Export Markets (% of Total)		Major Import Suppliers (% of Total)	
China	18.0	China	21.3
United States	17.7	United States	8.8
South Korea	7.7	Australia	6.4
Asia (inc. the above)	33.4	Asia (inc. the above)	36.1
EU	10.2	Middle East	19.2
Latin America	5.1	EU	9.4



### 2014 GDP Growth and Inflation Forecasts

Consensus Forecasts from Survey of:





## GERMANY

SEPTEMBER 2013

	Average % Change on Previous Calendar Year													
	Gross Domestic Product		Private Consumption		Machinery & Equipment Investment		Industrial Production		Consumer Prices		Producer Prices		Negotiated Wages and Salaries	
	Bruttoinlandsprodukt		Privater Verbrauch		Ausrüstungs-investitionen		Produktion im Produzierenden Gewerbe		Preisindex für die Lebenshaltung		Index für Erzeugerpreise		Tariflohn- und -gehaltsniveau	
Economic Forecasters	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014
Kiel Economics	1.0	2.5	1.4	2.5	0.4	8.2	na	na	1.6	1.5	na	na	2.7	2.7
Allianz	0.8	2.1	1.0	1.6	-2.0	6.6	0.2	4.7	1.6	1.9	0.9	2.2	3.3	3.4
Feri EuroRating	0.8	2.1	0.9	1.3	-0.7	6.3	1.2	2.9	1.7	2.2	0.2	2.1	2.9	2.9
IW - Cologne Institute	0.7	1.6	0.5	1.0	0.0	5.5	0.0	3.5	1.7	1.9	1.5	2.0	2.5	2.5
DZ Bank	0.6	2.0	0.9	1.4	-1.8	7.3	-0.8	2.5	1.7	2.1	0.7	2.5	na	na
Goldman Sachs	0.6	2.0	1.1	1.7	-2.4	2.5	0.1	3.3	1.8	2.0	na	na	na	na
MM Warburg	0.6	1.7	1.1	1.3	-2.1	4.5	0.0	2.1	1.5	1.6	0.5	1.5	2.7	2.5
Sal Oppenheim	0.6	1.5	1.0	1.1	-2.5	4.0	na	na	1.5	1.9	na	na	na	na
IFO - Munich Institute	0.6	1.9	0.8	1.1	-1.7	7.3	na	na	1.6	1.9	na	na	na	na
Econ Intelligence Unit	0.5	1.3	0.9	1.3	na	na	-0.1	2.1	1.7	1.8	1.0	1.6	na	na
Bank Julius Baer	0.5	1.7	1.2	1.8	0.3	6.0	0.8	5.0	1.6	2.5	0.4	0.9	3.3	3.0
Bank of America - Merrill	0.5	1.4	1.0	1.4	na	na	1.1	3.1	1.6	1.7	na	na	na	na
BayernLB	0.5	1.5	0.9	1.2	-2.1	4.7	0.2	2.2	1.6	1.8	0.9	1.8	2.9	3.0
Deutsche Bank	0.5	1.5	0.9	1.0	-2.5	4.1	0.6	3.7	1.6	1.6	0.6	1.6	2.9	2.6
HWI	0.5	1.7	0.9	1.1	-2.0	5.2	1.5	2.5	1.5	1.9	0.5	1.6	3.2	3.4
IHS Global Insight	0.5	1.8	1.1	1.7	-1.8	6.5	0.7	5.9	1.6	1.6	0.6	2.0	2.4	2.5
UBS	0.5	1.5	1.0	1.2	na	na	na	na	1.8	1.6	na	na	na	na
UniCredit	0.5	1.5	1.0	0.9	-1.8	3.5	na	na	1.5	1.4	na	na	2.9	2.8
IfW - Kiel Institute	0.5	1.8	0.8	1.1	-3.1	5.9	na	na	1.7	2.1	na	na	na	na
DekaBank	0.4	1.7	0.9	1.5	-2.2	5.4	-0.6	3.7	1.6	2.0	0.6	1.8	2.7	2.7
Citigroup	0.4	1.8	1.5	2.0	-3.3	3.9	1.3	2.8	1.7	1.9	na	na	na	na
Commerzbank	0.4	1.5	0.9	1.6	-2.6	4.9	0.3	2.2	1.6	2.2	0.5	1.8	3.0	3.0
DIW - Berlin	0.4	1.8	1.1	1.5	-2.3	8.8	na	na	1.6	1.9	na	na	na	na
Helaba Frankfurt	0.4	1.7	1.0	1.3	-1.0	5.0	0.3	2.0	1.5	2.1	0.7	2.0	2.8	2.8
HSBC Trinkaus	0.4	1.3	1.1	1.3	-3.8	2.4	1.0	1.9	1.6	1.8	0.6	1.6	3.1	3.0
Landesbank Berlin	0.4	1.3	0.7	0.9	-2.4	4.1	-0.4	2.4	1.5	1.6	0.3	1.0	2.8	2.7
RWI Essen	0.4	1.9	1.0	1.1	-2.3	7.2	na	na	1.5	1.7	na	na	2.9	2.9
Morgan Stanley	0.4	1.8	1.7	1.3	-3.4	3.9	-0.6	2.2	1.6	1.9	na	na	na	na
WGZ Bank	0.3	1.3	0.9	1.2	-2.7	3.0	0.0	2.5	1.5	1.6	0.7	1.0	2.8	2.6
BHF-Bank	0.2	1.7	0.7	0.9	-2.7	3.9	-0.5	2.0	1.6	1.8	0.3	0.6	2.0	2.5
Consensus (Mean)	0.5	1.7	1.0	1.3	-2.0	5.2	0.3	3.0	1.6	1.8	0.6	1.6	2.8	2.8
Last Month's Mean	0.4	1.7	1.0	1.3	-2.2	5.1	0.3	2.9	1.6	1.9	0.7	1.6	2.9	2.8
3 Months Ago	0.5	1.6	0.9	1.2	-2.1	5.1	0.1	2.9	1.6	1.9	1.2	2.0	2.9	2.8
High	1.0	2.5	1.7	2.5	0.4	8.8	1.5	5.9	1.8	2.5	1.5	2.5	3.3	3.4
Low	0.2	1.3	0.5	0.9	-3.8	2.4	-0.8	1.9	1.5	1.4	0.2	0.6	2.0	2.5
Standard Deviation	0.2	0.3	0.2	0.4	1.0	1.7	0.7	1.1	0.1	0.2	0.3	0.5	0.3	0.3
Comparison Forecasts														
Government (Apr. '13)	0.5	1.6	0.6	1.0	-2.2	5.6			1.7	1.9				
Eur Commission (May '13)	0.4	1.8	0.8	1.4	-3.5	5.4			1.8	1.6				
IMF (July '13)	0.3	1.3												
OECD (May '13)	0.4	1.9	1.0	2.2					1.6	2.0				

## Government and Background Data

**Chancellor** - Mrs. Angela Merkel (Christian Democratic Party or CDU).  
**Parliament** - A coalition of the CDU/CSU and SPD has a small majority in the 622-seat Bundestag (lower house); the CDU/CSU has a majority in the Bundesrat (upper house). **Next Elections** - September 22, 2013 (Bundestag).  
**Nominal GDP** - Euro 2,646bn (2012). **Population** - 82.8mn (mid-year 2012).  
**\$/Euro Exchange Rate** - 1.286 (average, 2012).

## Quarterly Consensus Forecasts

*Historical Data and Forecasts (bold italics) From Survey of September 9, 2013*

	2013			2014			2015		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Gross Domestic Product	-0.3	0.5	0.6	1.6	1.9	1.6	1.6	1.6	1.7
Private Consumption	0.6	1.1	1.1	1.5	1.5	1.3	1.3	1.3	1.2
Consumer Prices	1.5	1.5	1.7	1.7	1.8	2.0	1.9	2.0	2.0
Percentage Change (year-on-year)									

## Historical Data

* % change on previous year	2009	2010	2011	2012
Gross Domestic Product*	-5.1	4.0	3.3	0.7
Private Consumption*	0.2	1.0	2.3	0.8
Machinery & Eqpt Investment*	-22.7	10.0	5.8	-4.0
Industrial Production*	-15.4	10.1	6.8	-0.3
Consumer Prices*	0.4	1.2	2.0	2.0
Producer Prices*	-4.2	1.6	5.6	2.0
Negotiated Wages & Salaries*	2.3	1.9	1.6	3.3
Unemployment Rate, %	8.1	7.7	7.1	6.8
Current Account, Euro bn	142	156	161	186
General Govt. Budget Balance (Maastricht definition), Euro bn	-73.2	-103	-20.2	2.5
3 mth Euro, % (end yr)	0.7	1.0	1.4	0.2
10 Yr German Govt Bond, % (end yr)	3.4	3.0	1.8	1.5

Year Average	Annual Total				Rates on Survey Date			
					0.2%		2.0%	
Unemploy- ment Rate (%)	Current Account (Euro bn)		General Govt Budget Bal (Maastricht) (Eurobn)		3 month Euro Rate (%)		10 Year German Govt Bond Yield (%)	
Arbeitslosen- quote, % der Erwerbspers. Insgesamt	Leistungsbilanz (€ bn)		Finanzierungs- saldo des Staates (Maastricht) (€ bn)		3 Monate Euro (%)		Rendite von Bundesan- leihen, 10 Jahre (%)	
2013 2014	2013 2014	2013 2014		End End Dec'13 Sep'14		End End Dec'13 Sep'14		
7.1 6.6	183 178	4.3 24.6	0.2 0.7	1.9 2.5				
6.8 6.6	184 171	-1.0 18.0	0.2 0.6	1.6 2.3				
6.8 6.6	191 196	-4.9 -0.4	0.3 0.8	1.8 2.4				
6.5 6.5	na na	-5.0 5.0	0.2 0.5	1.5 2.0				
6.9 6.8	180 170	3.0 8.0	0.2 0.3	1.6 1.7				
na na	173 167	na na	na na	na na				
6.9 6.8	190 195	3.0 2.0	0.3 0.5	1.6 1.9				
6.9 6.9	na na	na na	0.2 0.3	1.9 2.0				
6.9 7.0	197 200	-5.1 -3.2	0.2 0.2	2.0 2.2				
na na	na na	na na	na na	na na				
6.9 6.8	na na	na na	0.2 0.3	1.9 2.5				
6.8 6.6	184 186	-3.7 1.0	na na	na na				
6.9 6.7	176 179	-6.0 5.0	0.3 0.5	1.8 2.2				
6.8 6.6	187 190	0.0 5.6	0.5 0.5	1.8 2.8				
6.9 6.6	195 200	3.2 11.4	0.3 0.6	2.0 2.1				
6.8 6.6	182 172	3.2 -0.3	0.2 0.2	2.1 2.3				
7.2 7.0	181 183	na na	0.2 0.2	1.7 1.8				
6.9 6.8	160 155	0.0 -5.0	0.3 0.5	2.0 2.5				
6.8 6.8	na na	-1.8 1.4	na na	1.8 2.3				
6.8 6.7	184 192	-8.2 0.0	0.3 0.5	1.9 2.2				
7.0 6.8	188 170	-2.9 7.1	0.3 0.3	1.7 1.8				
6.8 6.4	209 208	-4.0 5.0	0.3 0.3	1.8 2.0				
6.9 7.0	189 179	1.8 10.4	na na	na na				
6.8 6.5	190 195	0.0 0.5	0.3 0.4	1.7 2.3				
6.9 6.8	174 170	-5.0 3.0	0.1 0.1	2.0 1.6				
6.8 6.7	186 190	0.0 0.0	0.3 0.5	1.9 2.0				
6.9 6.7	195 203	-5.0 1.0	0.2 0.2	1.5 1.5				
6.9 7.0	180 185	-0.2 3.0	na na	na na				
6.9 7.0	190 190	na na	0.2 0.2	1.9 1.9				
6.9 6.6	200 220	-7.0 5.0	0.3 0.5	1.9 2.3				
6.9 6.7	186 186	-1.7 4.5	0.2 0.4	1.8 2.1				
6.9 6.8	182 181	-3.3 3.5						
6.9 6.7	179 179	-2.0 5.0						
7.2 7.0	209 220	4.3 24.6	0.5 0.8	2.1 2.8				
6.5 6.4	160 155	-8.2 -5.0	0.1 0.1	1.5 1.5				
0.1 0.2	10 15	3.7 6.6	0.1 0.2	0.2 0.3				
	171 169							

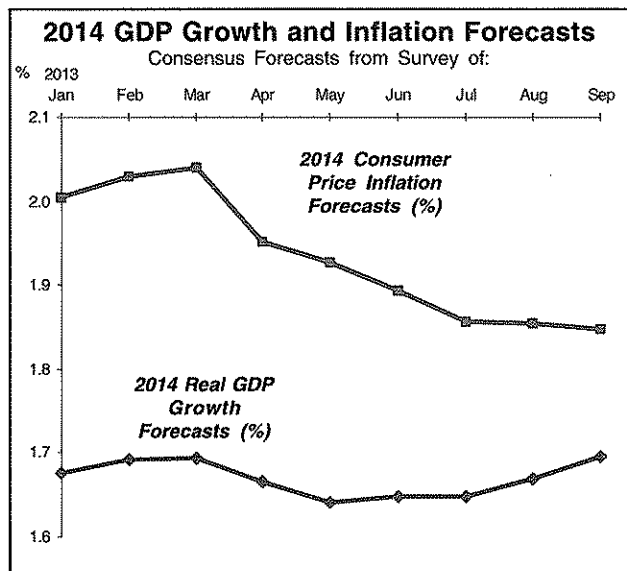
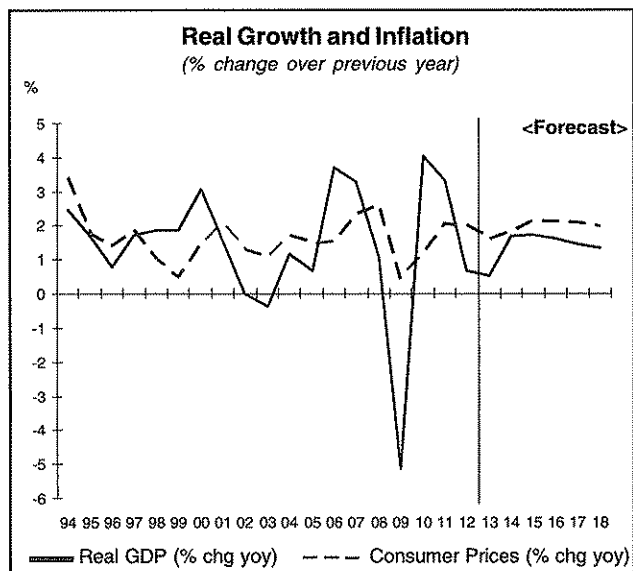
### Robust Domestic Demand Spurs Q2 Expansion

The detailed breakdown of the Q2 national accounts confirmed a 0.7% (q-o-q) expansion in GDP, driven by solid consumer spending and a rebound in investment as the Euro zone exited its record-long recession. German private consumption quickened to 0.5% (q-o-q) while investment in machinery and equipment advanced by 0.9%, its first increase since Q3 2011. Moreover, the IFO index climbed to a sixteen-month high of 107.5 in August from 106.2 in July. This upturn in business confidence alongside the ECB's forward guidance on low interest rates has fuelled hopes for a sustained recovery in investment going into next year. Industrial production slid by a greater-than-anticipated 1.7% (m-o-m) in July, though this was primarily payback for a strong 2.0% rise recorded in June. By contrast, construction output leapt by 2.7% (m-o-m) in July, and the sector looks set to regain momentum in Q3 following a protracted German winter which extended into Q2. Elsewhere, robust demand at home and abroad lifted the PMI for manufacturing from 50.7 in July to 51.8 in August, adding to signs of an improving economy. However, recent disappointing data on retail sales and exports underscore the still-fragile global environment. Retail sales fell for a second consecutive month by 1.4% (m-o-m) in July while a drop in Euro zone demand saw exports unexpectedly decline by 1.1% (m-o-m) over the same period. Many observers, though, are predicting a much-improved export performance over the remainder of this year.

Inflation cooled to 1.5% (y-o-y) in August from 1.9% in July, due to a marked deceleration in energy prices. Our panel has lifted its forecast for 2013 GDP growth from 0.4% to 0.5% this month.

### Direction of Trade – 2012

Major Export Markets (% of Total)		Major Import Suppliers (% of Total)	
France	10.1	Netherlands	14.1
United Kingdom	7.1	France	7.5
Netherlands	6.9	China	6.7
EU	60.8	EU	64.3
Eastern Europe	14.1	Eastern Europe	14.2
Asia (ex. Japan)	7.7	Asia (ex. Japan)	9.7



	Average % Change on Previous Calendar Year											
	Gross Domestic Product		Household Consumption		Business Investment		Manufacturing Production		Consumer Prices		Hourly Wage Rates	
	Produit Intérieur Brut		Consommation des Ménages		Investissements des Entreprises		Production Manufacturière		Prix à la Consommation		Taux de Salaire Horaire	
Economic Forecasters	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014
Barclays Capital	0.2	1.2	0.2	0.3	-2.3	2.7	na	na	1.0	1.1	na	na
Euler Hermes	0.2	0.6	0.4	0.5	-2.3	0.2	na	na	1.2	1.6	na	na
Exane	0.2	1.0	0.2	0.4	-1.9	2.9	-1.2	0.8	1.0	1.3	1.7	1.5
PAIR Conseil	0.2	0.6	0.2	0.4	-2.0	1.0	-1.3	0.7	0.9	1.4	na	na
UniCredit	0.2	0.9	0.3	0.7	-2.0	0.6	na	na	1.0	1.9	1.8	2.0
Citigroup	0.2	0.8	0.3	0.5	-2.4	-0.1	-1.3	0.3	1.0	1.6	1.7	1.5
Econ Intelligence Unit	0.1	0.8	0.2	0.6	na	na	na	na	1.1	1.8	na	na
Credit Agricole	0.1	0.8	0.1	0.5	-2.0	1.0	-1.3	0.9	1.1	1.6	na	na
BNP Paribas	0.1	0.8	0.2	0.4	-2.1	1.9	na	na	1.0	1.3	1.8	1.9
AXA Investment Managers	0.1	0.6	0.3	0.4	-2.2	0.4	na	na	1.0	1.6	na	na
Bank of America - Merrill	0.1	0.7	0.2	0.5	na	na	-0.8	1.4	1.0	1.2	na	na
BIPE	0.1	0.8	0.3	0.6	-2.6	-0.9	na	na	1.0	1.6	1.7	1.7
Coe-Rexecode	0.1	0.6	0.2	0.2	-2.0	0.5	na	na	1.1	1.6	1.8	1.6
HSBC	0.1	0.7	0.2	0.3	-1.7	1.9	-1.1	0.9	1.0	1.7	1.7	1.8
Morgan Stanley	0.0	0.6	0.3	0.6	-2.2	0.8	-1.3	0.8	1.0	1.6	na	na
Goldman Sachs	0.0	0.5	-0.2	0.3	-2.6	0.1	-1.3	-0.7	1.1	1.5	na	na
IHS Global Insight	0.0	0.6	0.1	0.3	-1.7	0.7	na	na	1.0	1.6	1.8	1.8
ING Financial Markets	0.0	1.0	0.3	1.2	-2.4	3.8	na	na	1.1	1.9	na	na
Natixis	0.0	0.8	0.2	0.6	-2.3	1.6	-1.3	1.1	1.0	1.6	na	na
Oddo Securities	0.0	0.7	0.1	0.4	-2.4	0.7	-1.0	1.8	0.9	1.4	1.4	1.6
Societe Generale	0.0	0.5	0.2	0.7	-2.3	1.1	na	na	1.0	1.3	2.1	2.0
GAMA	-0.1	0.4	-0.1	0.1	-2.3	0.5	na	na	1.0	1.5	1.7	1.7
Total	-0.1	0.8	-0.1	0.8	-1.5	1.0	na	na	1.1	1.4	na	na
OFCE	-0.2	1.2	0.2	1.3	-2.5	0.8	na	na	1.3	1.1	na	na
UBS	-0.3	0.7	0.0	0.8	na	na	na	na	0.9	1.0	na	na
Consensus (Mean)	0.1	0.8	0.2	0.5	-2.2	1.1	-1.2	0.8	1.0	1.5	1.7	1.7
Last Month's Mean	-0.3	0.6	-0.1	0.4	-2.5	0.7	-2.1	0.7	1.0	1.5	1.8	1.7
3 Months Ago	-0.3	0.6	-0.2	0.4	-2.3	0.8	-2.6	0.6	1.0	1.5	1.7	1.7
High	0.2	1.2	0.4	1.3	-1.5	3.8	-0.8	1.8	1.3	1.9	2.1	2.0
Low	-0.3	0.4	-0.2	0.1	-2.6	-0.9	-1.3	-0.7	0.9	1.0	1.4	1.5
Standard Deviation	0.1	0.2	0.1	0.3	0.3	1.1	0.2	0.7	0.1	0.2	0.2	0.2
Comparison Forecasts												
Government (Apr. '13)	0.1	1.2	0.2	0.9								
Eur Commission (May '13)	-0.1	1.1	-0.1	0.9					1.2	1.7		
IMF (June '13)	-0.2	0.8	-0.1	0.9					1.6	1.5		
OECD (May '13)	-0.3	0.8	-0.1	0.2	-2.3	0.7			1.1	1.0		

## Government and Background Data

**President** - Mr. François Hollande (Parti Socialiste). **Prime Minister** - Mr. Jean-Marc Ayrault (Parti Socialiste). **Parliament** - The Socialists currently have 278 out of the 577 seats in the National Assembly. **Next Elections** - Legislative - first round: May 2017. Presidential - first round: April 2017. **Nominal GDP** - Euro2,032bn (2012). **Population** - 63.9mn (mid-year, 2012). **\$/Euro Exchange Rate** - 1.286 (average, 2012).

## Quarterly Consensus Forecasts

*Historical Data and Forecasts (bold italics) From Survey of September 9, 2013*

	2013				2014				2015			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Gross Domestic Product	-0.5	0.3	<b>0.1</b>	<b>0.5</b>	<b>0.7</b>	<b>0.6</b>	<b>0.8</b>	<b>0.9</b>	<b>1.1</b>	<b>1.1</b>		
Household Consumption	-0.4	0.5	<b>0.4</b>	<b>0.4</b>	<b>0.5</b>	<b>0.3</b>	<b>0.5</b>	<b>0.7</b>	<b>0.9</b>	<b>0.9</b>		
Consumer Prices	1.1	0.8	<b>1.0</b>	<b>1.1</b>	<b>1.4</b>	<b>1.6</b>	<b>1.5</b>	<b>1.6</b>	<b>1.5</b>	<b>1.6</b>		

*Percentage Change (year-on-year).*

## Historical Data

* % change on previous year	2009	2010	2011	2012
Gross Domestic Product*	-3.1	1.6	2.0	0.0
Household Consumption*	0.2	1.5	0.5	-0.4
Business Investment*	-13.6	6.2	3.1	-1.9
Manufacturing Production*	-16.0	4.6	3.7	-3.4
Consumer Prices*	0.1	1.5	2.1	2.0
Hourly Wage Rates*	2.3	1.8	2.2	2.2
Unemployment Rate (ILO), %	9.2	9.3	9.2	9.8
Current Account, Euro bn	-25.1	-25.5	-35.2	-44.4
General Govt. Budget Balance				
(Maastricht definition), Euro bn	-143	-137	-106	-98.8
3 mth Euro, % (end yr)	0.7	1.0	1.4	0.2
10 Yr French Govt Bond, % (end yr)	3.6	3.4	3.2	2.0

Year Average	Annual Total		Rates on Survey Date	
			0.2%	2.6%
Unemployment Rate, ILO (%)	Current Account (Euro bn)	General Govt Budget Balance (Maastricht) (Euro bn)	3 month Euro Rate (%)	10 Year French Govt Bond Yield (%)
Taux de Chômage, BIT (%)	Solde Courant (€ md)	Balance Budgétaire (Maastricht) (€ md)	Taux d'intérêt 3 mois Euro (%)	Rendement des obligations d'Etat, 10 ans (%)
2013 2014	2013 2014	2013 2014	End Dec'13 End Sep'14	End Dec'13 End Sep'14
10.9 10.9	na na	-81.3 -71.6	0.3 0.4	2.1 2.5
10.9 10.9	-39.0 -37.0	-81.0 -76.0	na na	na na
10.7 11.1	-41.0 -38.0	-79.2 -71.5	0.2 0.2	2.3 2.7
10.7 11.2	-28.9 -22.7	-80.5 -75.8	0.2 0.3	2.5 2.4
10.9 11.3	-41.0 -36.0	-82.0 -73.5	na na	na na
10.6 10.7	-28.1 -12.5	-78.1 -67.7	0.3 0.3	2.4 2.6
10.7 10.7	na na	na na	na na	na na
10.6 10.8	-40.9 -41.0	-80.2 -74.4	0.2 0.4	2.4 2.9
10.6 11.3	-37.1 -37.7	-87.0 -77.0	0.3 0.3	2.3 2.5
10.5 10.4	na na	na na	0.2 0.4	2.5 2.8
na na	-45.3 -38.3	-80.4 -73.6	na na	na na
10.6 11.1	-43.6 -42.6	-88.0 -85.3	0.2 0.2	2.6 2.8
10.5 10.8	-31.0 -24.0	-86.0 -75.0	0.2 0.2	2.5 2.9
10.5 10.5	-38.7 -44.1	-86.0 -89.0	0.1 0.1	2.6 2.1
10.5 10.8	-42.7 -45.8	-80.9 -74.6	0.3 0.6	2.9 2.5
11.1 11.5	-43.5 -26.2	-82.4 -77.8	na na	na na
na na	-45.9 -42.2	-81.4 -62.0	na na	na na
10.8 10.6	na na	na na	0.2 0.5	2.5 2.7
10.6 10.9	-35.0 -30.0	-80.0 -80.0	na na	na na
10.7 11.1	-37.1 -36.3	-88.0 -82.0	0.2 0.2	2.7 3.2
10.6 11.1	-40.0 -39.0	-83.0 -74.0	0.2 0.3	2.7 3.1
10.9 11.1	na na	-82.0 -76.0	0.2 0.2	2.1 2.3
10.6 10.8	-44.0 -40.0	-80.0 -75.0	0.2 0.3	2.2 2.5
10.7 11.0	-49.5 -50.7	-75.0 -63.0	na na	na na
10.3 10.2	-38.2 -33.6	-80.4 -69.9	0.2 0.2	2.5 2.6
10.7 10.9	-39.5 -35.9	-81.9 -74.8	0.2 0.3	2.5 2.6
10.8 11.1	-41.3 -35.9	-81.7 -74.4		
10.8 11.0	-41.2 -37.2	-79.8 -72.2		
11.1 11.5	-28.1 -12.5	-75.0 -62.0	0.3 0.6	2.9 3.2
10.3 10.2	-49.5 -50.7	-88.0 -89.0	0.1 0.1	2.1 2.1
0.2 0.3	5.6 9.0	3.3 6.2	0.0 0.1	0.2 0.3
10.6 10.9	-32.2 -36.1			
10.7 11.1				

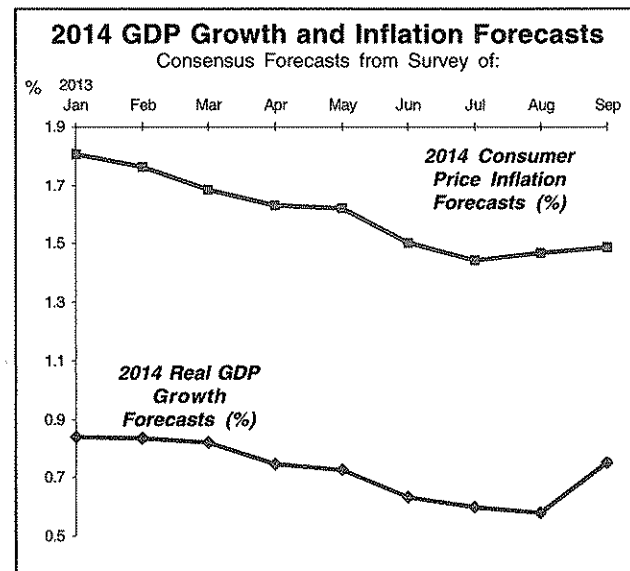
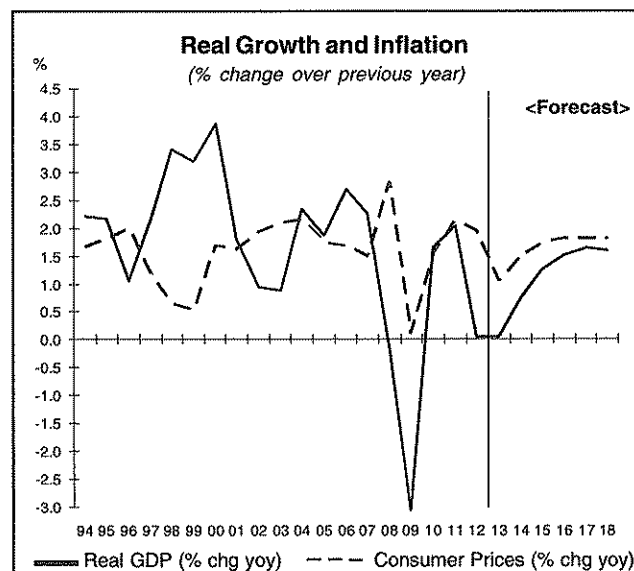
### Improvement in Consensus Expectations

As mentioned last month, the Q2 national accounts released just after August's survey deadline showed GDP advancing by a stronger-than-expected 0.5% (q-o-q). This followed falls of -0.2% in both Q4 2012 and Q1 2013 GDP. Our panel has now been able to incorporate the Q2 release into some of its forecasts, prompting an uptick in the 2013 GDP consensus from -0.3% last month to +0.1%. The 0.5% gain in Q2 growth was its largest increase since 2011, boosted by a 0.4% rise in household consumption. Unseasonably cold weather raised household's heating bills while inventory-building also supported activity. However, the outlook for consumption remains lacklustre. Tax increases are weighing on households with more to come in 2014 (alongside planned public spending cuts). In addition, the jobless rate for metropolitan France rose from 10.1% in Q4 2012 to 10.4% in Q1 2013 and 10.5% in Q2. The employment survey collecting the jobless numbers was revamped in Q1, but the uptick is still significant. Unemployment forecasts have been downgraded, however, while 2013 consumption expectations have risen to +0.2% this month. Elsewhere, new car sales saw a 10.9% (y-o-y) pickup in August, although this derives from a low base. Indeed, excluding autos, retail commerce fell by 1.4% (m-o-m) in June, almost completely wiping out May's 1.6% rise.

After May and June's falls, manufacturing declined again in July, by 0.7% (m-o-m). Despite improved industrial sentiment and in the latest PMI, both indices continue to hover just below the break-even level. Encouragingly, manufacturing orders rose by 0.5% (m-o-m) in June after a 1.7% decline in May, boosted by a 2.2% surge in export orders. The 2013 production forecast has risen from -2.1% to -1.2%.

### Direction of Trade – 2012

Major Export Markets (% of Total)		Major Import Suppliers (% of Total)	
Germany	16.7	Germany	19.5
Belgium	7.5	Belgium	11.3
Italy	7.5	Italy	7.6
EU	60.1	EU	68.6
Eastern Europe	7.5	Eastern Europe	7.8
Asia (ex. Japan)	6.3	Asia (ex. Japan)	7.3



## UNITED KINGDOM

SEPTEMBER 2013

	Average % Change on Previous Calendar Year																	
	Gross Domestic Product		Household Consumption		Gross Fixed Investment		Company Trading Profits		Manufacturing Production		Retail Prices (RPI-X, underlying rate)		Consumer Prices Index (HICP)		Output Prices		Average Weekly Earnings	
Economic Forecasters	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014
JP Morgan	1.5	3.1	1.6	1.4	-2.3	6.1	na	na	na	na	3.1	3.2	2.6	2.3	na	na	na	na
IHS Global Insight	1.5	2.4	1.8	2.2	-1.9	6.8	na	na	-0.2	2.3	3.3	3.0	2.8	2.5	1.8	2.3	1.5	2.5
ING Financial Markets	1.5	2.4	1.5	1.8	-1.8	6.8	na	na	-0.2	2.0	3.2	3.1	2.6	2.5	2.0	2.4	1.6	2.4
Schroders	1.5	2.1	1.6	1.6	-3.1	3.9	na	na	-0.2	1.5	3.2	3.4	2.7	2.9	na	na	na	na
Oxford Economics	1.4	2.2	1.5	1.5	-2.5	6.7	5.5	3.2	0.1	3.3	3.1	2.6	2.6	1.8	1.1	1.4	1.2	2.9
Beacon Econ Forecasting	1.4	2.7	2.0	2.9	-0.7	10.0	na	na	-0.5	3.2	2.8	2.3	2.5	1.8	1.3	2.8	1.8	2.6
Deutsche Bank	1.4	2.1	1.1	1.4	0.6	4.0	na	na	-1.7	0.3	na	na	2.7	2.1	1.7	1.8	0.8	2.6
Economic Perspectives	1.4	1.7	1.5	1.6	-1.6	5.4	5.0	-3.0	0.2	1.7	3.3	3.5	2.8	3.4	3.2	4.0	2.2	2.7
Goldman Sachs	1.4	2.3	2.0	2.1	-2.0	5.1	na	na	na	na	3.1	3.2	2.6	2.4	na	na	0.9	2.2
RBS Markets	1.4	2.0	1.3	1.6	-2.6	5.2	na	na	0.3	1.2	3.1	3.0	2.6	2.4	1.8	2.2	1.9	3.0
Societe Generale	1.4	2.2	1.6	1.9	-2.7	5.1	6.8	8.7	0.1	3.0	na	na	2.6	2.9	2.0	2.5	1.3	2.0
Econ Intelligence Unit	1.4	1.8	1.6	1.8	na	na	na	na	-0.3	1.0	na	na	2.7	2.7	na	na	na	na
Barclays Capital	1.3	2.2	1.5	1.5	-1.1	8.6	na	na	-0.6	2.2	3.2	3.1	2.7	2.5	na	na	na	na
Bank of America - Merrill	1.3	2.2	1.4	1.6	-2.8	6.2	na	na	0.0	3.8	na	na	2.7	2.4	na	na	na	na
Lombard Street Research	1.3	2.3	1.6	1.5	0.6	10.5	10.1	9.0	na	na	3.0	2.5	2.6	2.0	na	na	1.8	3.6
Nomura	1.3	1.7	1.6	1.5	-3.7	0.8	na	na	-0.9	0.5	3.0	3.1	2.6	2.4	1.8	2.6	1.3	2.0
Experian	1.3	1.8	1.9	1.9	-2.9	6.2	na	na	-0.4	1.9	3.1	3.0	2.7	2.4	na	na	1.4	3.3
Confed of British Industry	1.2	2.3	1.6	2.1	-3.2	6.8	na	na	-0.1	3.0	3.1	3.0	2.7	2.4	1.8	2.0	0.7	2.3
HSBC	1.2	2.2	1.4	1.5	-2.1	6.7	na	na	-0.2	3.8	na	na	2.7	2.6	na	na	1.5	2.6
Liverpool Macro Research	1.2	2.2	na	na	na	na	na	na	na	na	2.5	3.1	2.7	2.5	na	na	2.2	2.6
Citigroup	1.1	2.1	1.9	1.8	-5.9	3.8	11.4	9.8	-1.1	0.9	3.1	2.7	2.6	2.0	na	na	0.6	1.3
UBS	1.1	1.8	1.4	2.0	-3.4	4.9	na	na	na	na	na	na	2.8	2.8	na	na	1.1	2.1
Credit Suisse	1.0	1.8	0.9	1.3	1.1	5.7	na	na	na	na	3.1	3.4	2.6	2.4	na	na	na	na
Cambridge Econometrics	0.8	1.5	1.1	1.6	0.3	4.5	na	na	-1.1	1.7	3.1	3.2	2.4	2.9	na	na	2.2	3.1
Consensus (Mean)	1.3	2.1	1.5	1.7	-2.0	5.9	7.8	5.5	-0.4	2.1	3.1	3.0	2.7	2.5	1.8	2.4	1.4	2.5
Last Month's Mean	1.2	1.9	1.5	1.7	-1.7	5.7	6.7	4.2	-0.4	2.0	3.1	3.0	2.7	2.5	1.8	2.4	1.5	2.6
3 Months Ago	0.9	1.7	1.1	1.5	1.3	5.0	3.2	2.7	-0.5	1.7	3.2	3.0	2.7	2.5	1.9	2.5	1.5	2.3
High	1.5	3.1	2.0	2.9	1.1	10.5	11.4	9.8	0.3	3.8	3.3	3.5	2.8	3.4	3.2	4.0	2.2	3.6
Low	0.8	1.5	0.9	1.3	-5.9	0.8	5.0	-3.0	-1.7	0.3	2.5	2.3	2.4	1.8	1.1	1.4	0.6	1.3
Standard Deviation	0.2	0.3	0.3	0.4	1.6	2.1	2.8	5.4	0.5	1.1	0.2	0.3	0.1	0.4	0.6	0.7	0.5	0.5
Comparison Forecasts																		
Treasury - OBR (Mar. '13)	0.6	1.8	0.5	1.2	2.2	6.7							2.8	2.4			1.4	2.7
Eur Commission (May '13)	0.6	1.7	0.8	1.3	1.8	4.5							2.8	2.5				
IMF (July '13)	0.9	1.5																
OECD (May '13)	0.8	1.5	0.9	1.2	1.8	4.1							2.8	2.4				

## Government and Background Data

**Prime Minister** - Mr. David Cameron (Conservative Party). **Parliament** - The Conservative party has formed a coalition with the Liberal Democrat party, with a working majority in the 650-seat House of Commons (lower house). **Next Election** - By May 2015 (general election). **Nominal GDP** - £1,541bn (2012). **Population** - 62.8mn (mid-year, 2012). **\$/£ Exchange Rate** - 1.580 (average, 2012).

## Quarterly Consensus Forecasts

*Historical Data and Forecasts (bold italics) From Survey of September 9, 2013*

	2013				2014				2015			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Gross Domestic Product	0.3	1.5	1.4	2.1	2.4	2.2	2.0	2.1	2.0	2.1		
Household Consumption	1.5	1.6	1.8	1.6	1.7	1.8	1.7	1.9	2.0	2.0		
Consumer Prices (HICP)	2.8	2.7	2.7	2.5	2.3	2.5	2.5	2.4	2.5	2.5		

*Percentage Change (year-on-year).*

## Historical Data

* % change on previous year	2009	2010	2011	2012
Gross Domestic Product*	-5.2	1.7	1.1	0.2
Household Consumption*	-3.6	1.0	-0.5	1.2
Gross Fixed Investment*	-16.7	2.8	-2.4	0.5
Company Trading Profits*	-10.1	4.0	5.9	4.5
Manufacturing Production*	-10.2	4.2	1.8	-1.7
Retail Prices (RPI-X underlying rate)*	2.0	4.8	5.3	3.2
Consumer Prices Index (HICP)*	2.2	3.3	4.5	2.8
Output Prices*	1.5	4.2	5.6	2.8
Average Weekly Earnings*	-0.1	2.4	2.4	1.4
Unemployment Rate % (Claimant Count)	4.6	4.6	4.7	4.8
Current Account, £ bn	-20.1	-40.0	-22.5	-59.2
Public Sector Net Borrowing (excl. financial interventions), fiscal yrs, £ bn	157	139	119	82.1*
3 mth Interbank, % (end yr)	0.7	0.8	1.1	0.5
10 Yr Gilt Yields, % (end yr)	4.0	3.6	2.1	2.0

\* Includes Royal Mail pension fund transfer of £28bn.

Year Average	Annual Total	Fiscal Years (Apr-Mar)	Rates on Survey Date			
			0.5%		3.0%	
Unemployment Rate (%) (Claimant Count)	Current Account (£ bn)	Public Sector Net Borrowing (£ bn)	3 month Interbank Rate (%)		10 Year Gilt Yield (%)	
2013 2014	2013 2014	FY 13-14 FY 14-15	End Dec'13	End Sep'14	End Dec'13	End Sep'14
na na	-52.1 -53.1	na na	0.5 0.5	na na	na na	na na
4.4 4.1	-53.1 -43.2	107 95	0.5 0.5	3.0 2.8	3.0 2.8	3.0 2.8
4.5 4.4	-48.0 -42.0	110 95	0.5 0.5	3.0 3.6	3.0 3.6	3.0 3.6
na na	na na	na na	0.5 0.6	2.7 2.9	2.7 2.9	2.7 2.9
4.4 4.2	-49.2 -44.4	103 95	0.5 0.5	2.9 3.0	2.9 3.0	2.9 3.0
4.5 4.3	-49.8 -63.3	101 107	na na	2.6 2.6	2.6 2.6	2.6 2.6
4.7 4.5	-45.0 -40.0	105 100	na na	na na	na na	na na
4.5 4.3	-45.0 -35.0	118 105	0.7 1.0	2.7 3.0	2.7 3.0	2.7 3.0
na na	-49.8 -38.3	na na	na na	na na	na na	na na
4.5 4.2	-44.0 -35.0	115 105	0.5 0.6	3.0 3.3	3.0 3.3	3.0 3.3
4.4 4.2	-55.8 -47.6	120 110	0.5 0.5	3.0 3.2	3.0 3.2	3.0 3.2
na na	na na	na na	na na	na na	na na	na na
na na	-49.1 -48.9	101 84	0.5 0.6	2.8 3.1	2.8 3.1	2.8 3.1
4.5 4.2	-48.0 -40.0	102 88	na na	na na	na na	na na
na na	-50.2 -53.8	95 85	na na	2.6 3.0	2.6 3.0	2.6 3.0
na na	-40.5 -25.5	107 84	0.5 0.6	2.9 3.1	2.9 3.1	2.9 3.1
4.6 4.3	-55.4 -50.3	109 94	0.5 0.5	2.2 2.6	2.2 2.6	2.2 2.6
4.4 4.1	-50.1 -44.7	106 93	na na	na na	na na	na na
na na	-26.0 -17.7	na na	0.5 0.5	2.7 2.1	2.7 2.1	2.7 2.1
4.5 4.2	-60.7 -62.9	120 106	na na	na na	na na	na na
4.6 4.7	-53.4 -48.8	103 89	0.5 0.5	2.7 2.9	2.7 2.9	2.7 2.9
4.7 5.0	-44.5 -37.0	110 100	0.5 0.5	2.5 2.7	2.5 2.7	2.5 2.7
na na	-39.9 -24.8	na na	0.5 0.5	2.4 2.8	2.4 2.8	2.4 2.8
4.7 4.9	-52.0 -44.5	na na	na na	na na	na na	na na
4.5 4.4	-48.3 -42.8	108 96	0.5 0.6	2.7 2.9	2.7 2.9	2.7 2.9
4.6 4.5	-48.8 -43.5	108 97				
4.8 4.8	-46.6 -42.7	109 98				
4.7 5.0	-26.0 -17.7	120 110	0.7 1.0	3.0 3.6	3.0 3.6	3.0 3.6
4.4 4.1	-60.7 -63.3	95 84	0.5 0.5	2.2 2.1	2.2 2.1	2.2 2.1
0.1 0.3	7.0 11.3	7 8	0.1 0.1	0.2 0.3	0.2 0.3	0.2 0.3
	-42.3 -33.0	120 108				

# Recovery Gains Momentum

Revised data from the ONS show that the economy expanded 0.7% (q-o-q) in Q2 following an initial 0.6% estimate. This revision stemmed largely from upgrades to manufacturing and construction output which advanced by 0.7% (q-o-q) and 1.4%, respectively. The expenditure-based breakdown of the Q2 national accounts reported a 0.4% (q-o-q) increase in household consumption while gross fixed capital formation accelerated modestly to 1.7%. Net trade also bolstered activity as exports of goods and services surged by 3.6% (q-o-q), their largest rise since Q4 2011. Robust services output has driven growth this year, and the largest jump in new business since May 1997 helped the PMI for the sector climb to 60.5 in August. Elsewhere, industrial production flatlined in m-o-m terms in July as warmer weather curbed demand for energy. The recent raft of encouraging news about the country's economic recovery has sparked an increase in consumer confidence, as reflected in a greater-than-anticipated 1.1% (m-o-m) rise in July retail sales. Real earnings, however, remain significantly below pre-crisis levels, and boosting living standards is set to be a pivotal topic going into the 2015 general election. The consensus for 2013 GDP has been upgraded to 1.3% this month, but growth is to remain below potential for some years to come.

Bank of England governor Mark Carney last month unveiled fresh measures to spur UK lending and signalled that the central bank is prepared to inject additional stimulus if the recovery falters. Net lending to businesses continued to fall in Q2, however. Carney also announced that banks which meet the BoE's strict capital requirements will be able to reduce their liquid assets in order to fund new loans.

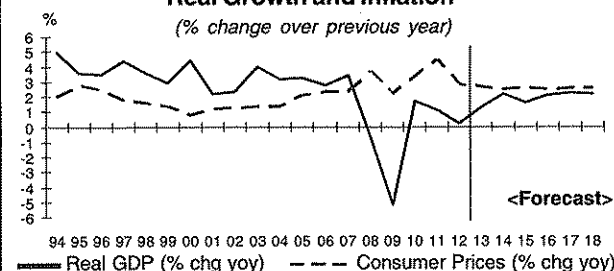
## UK Official Bank Rate – Sep. 9, 2013 = 0.50%

FORECASTS	End Sep. 2013	End Dec. 2013	End Mar. 2014	End June 2014
Consensus Mean Average:	0.50%	0.50%	0.52%	0.58%
Mode (most frequent forecast):	0.50%	0.50%	0.50%	0.50%

## Direction of Trade – 2012

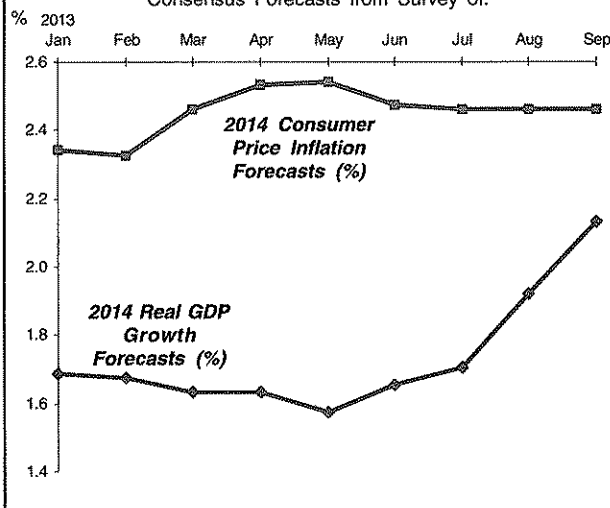
Major Export Markets (% of Total)	Major Import Suppliers (% of Total)
Germany 11.5	Germany 12.6
United States 10.5	China 8.0
Netherlands 9.0	Netherlands 7.5
EU 53.6	EU 49.2
Eastern Europe 5.6	Asia (ex. Japan) 12.1
Asia (ex. Japan) 5.5	Eastern Europe 7.0

## Real Growth and Inflation



## 2014 GDP Growth and Inflation Forecasts

Consensus Forecasts from Survey of:



	Average % Change on Previous Calendar Year													
	Gross Domestic Product		Household Consumption		Gross Fixed Investment		Industrial Production		Consumer Prices		Producer Prices		Contractual Hourly Earnings	
	<i>Prodotto Interno Lordo</i>		<i>Consumi delle Famiglie</i>		<i>Investimenti Fissi Lordi</i>		<i>Produzione Industriale</i>		<i>Prezzi al Consumo</i>		<i>Prezzi alla Produzione</i>		<i>Retribuzione Orarie Contrattuali</i>	
Economic Forecasters	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014
Citigroup	-1.6	-0.1	-2.2	-0.6	-6.2	0.3	na	na	1.5	1.3	na	na	na	na
Prometeia	-1.6	0.8	-2.5	-0.1	-6.7	1.1	-2.7	1.5	1.4	1.7	-0.9	1.4	1.4	1.4
Bank of America - Merrill	-1.7	-0.2	-2.7	-0.8	-7.0	-1.9	-2.9	0.7	1.4	1.5	na	na	na	na
ING Financial Markets	-1.7	0.6	-2.8	-0.6	-6.3	0.6	na	na	1.5	1.6	-0.5	0.8	1.4	1.4
REF Ricerche	-1.7	1.0	-2.0	0.5	-6.0	1.6	-3.5	na	1.4	1.7	-0.8	na	1.4	1.3
UniCredit	-1.7	0.6	-2.3	0.5	-6.7	1.1	na	na	1.5	1.8	na	na	na	na
Moody's Analytics	-1.7	0.6	-2.1	0.6	-5.9	0.6	-2.6	3.3	1.3	1.9	-0.9	1.5	na	na
ABI	-1.7	0.6	-3.4	-1.4	-5.3	2.5	-3.2	1.2	1.7	1.4	-0.8	1.3	1.5	1.7
Econ Intelligence Unit	-1.8	0.2	-3.0	0.1	-3.5	1.0	-2.7	0.2	1.2	0.7	-0.8	0.7	na	na
Centro Europa Ricerche	-1.8	0.8	-2.2	0.2	-6.8	0.0	na	na	1.6	1.7	na	na	na	na
Goldman Sachs	-1.8	0.4	-2.3	0.3	-6.3	0.7	-3.6	1.5	1.6	1.3	na	na	na	na
HSBC	-1.8	0.4	-2.5	-0.2	-6.3	0.1	-3.1	1.6	1.7	1.7	na	na	1.4	1.4
UBS	-1.8	0.4	-2.2	0.4	-6.1	0.9	-3.0	1.5	1.8	1.8	-0.4	0.9	1.4	1.6
Intesa Sanpaolo	-1.8	0.5	-2.5	0.2	-5.4	0.7	-2.9	0.7	1.4	1.8	-1.0	0.7	1.4	1.3
Banca Nze del Lavoro	-1.9	0.3	-2.7	-0.4	-6.1	1.2	-3.8	1.3	1.4	1.5	-0.5	0.6	1.5	1.4
Consensus (Mean)	-1.7	0.5	-2.5	-0.1	-6.0	0.7	-3.1	1.4	1.5	1.6	-0.7	1.0	1.4	1.4
Last Month's Mean	-1.8	0.3	-2.5	0.0	-6.1	0.2	-3.2	1.0	1.5	1.6	-0.6	1.0	1.4	1.4
3 Months Ago	-1.7	0.4	-2.5	-0.1	-4.5	0.3	-3.2	1.1	1.6	1.5	0.1	1.3	1.3	1.3
High	-1.6	1.0	-2.0	0.6	-3.5	2.5	-2.6	3.3	1.8	1.9	-0.4	1.5	1.5	1.7
Low	-1.9	-0.2	-3.4	-1.4	-7.0	-1.9	-3.8	0.2	1.2	0.7	-1.0	0.6	1.4	1.3
Standard Deviation	0.1	0.3	0.4	0.6	0.8	0.9	0.4	0.8	0.2	0.3	0.2	0.3	0.1	0.1
Comparison Forecasts														
Government (Mar. '13)	-1.3	1.3												
Eur Commission (May '13)	-1.3	0.7	-2.0	0.4	-3.5	2.5			1.6	1.5				
IMF (July '13)	-1.8	0.7												
OECD (May '13)	-1.8	0.4	-2.2	-0.4	-4.3	-1.4			1.6	1.2				

## Government and Background Data

**Prime Minister** - Mr. Enrico Letta. **Parliament** - A "grand coalition" with representation from major right- and left-wing political parties as well as technocrats was formed in April 2013. **Next Elections** - By 2018 (Parliamentary); 2020 (presidential). **Nominal GDP** - Euro1,566bn (2012). **Population** - 60.9mn (mid-year, 2012). **\$/Euro Exchange Rate** - 1.286 (average, 2012).

## Quarterly Consensus Forecasts

*Historical Data and Forecasts (bold italics) From Survey of September 9, 2013*

	2013				2014				2015			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Gross Domestic Product	-2.4	-2.1	-1.8	-0.7	0.0	0.4	0.6	0.7	1.2	1.3		
Household Consumption	-3.4	-3.3	-1.9	-1.1	-0.5	-0.1	0.3	0.5	0.8	0.9		
Consumer Prices	1.9	1.1	1.2	1.5	1.6	1.9	1.8	1.5	2.0	2.1		
<i>Percentage Change (year-on-year).</i>												

## Historical Data

* % change on previous year	2009	2010	2011	2012
Gross Domestic Product*	-5.5	1.7	0.5	-2.4
Household Consumption*	-1.6	1.5	0.1	-4.3
Gross Fixed Investment*	-11.7	0.5	-1.4	-8.0
Industrial Production*	-18.7	6.7	1.1	-6.5
Consumer Prices*	0.8	1.5	2.8	3.0
Producer Prices*	-4.7	3.0	4.8	3.6
Contractual Hourly Earnings*	3.1	2.1	1.7	1.5
Unemployment Rate,%	7.8	8.4	8.4	10.7
Current Account, Euro bn	-30.2	-54.5	-48.3	-8.4
General Govt. Budget Balance				
(Maastricht definition), Euro bn	-83.6	-69.3	-60.0	-47.6
3 mth Euro, % (end yr)	0.7	1.0	1.4	0.2
10 yr Italian Govt Bond, % (end yr)	4.2	4.9	7.0	4.5

Year Average		Annual Total				Rates on Survey Date			
						0.2%		4.5%	
Unemployment Rate (%)		Current Account (Euro bn)		General Govt Budget Bal (Maastricht) (Euro bn)		3 month Euro Rate (%)		10 Year Italian Govt Bond Yield (%)	
Tasso di Disoccupazione (%)		Partite Correnti (€ mld)		Indebitamento netto (Maastricht) (€ mld)		Interessi Euro Tri-mestrali (%)		Buoni del Tesoro Decennali (%)	
2013	2014	2013	2014	2013	2014	End Dec'13	End Sep'14	End Dec'13	End Sep'14
12.3	12.6	22.0	32.5	-55.2	-47.5	0.3	0.3	na	na
12.1	12.5	14.8	20.7	-49.4	-47.1	0.2	0.3	4.5	4.6
12.2	12.7	21.4	29.6	-50.2	-41.2	na	na	na	na
12.1	12.2	12.1	9.5	-47.8	-46.4	na	na	na	na
12.3	12.8	19.9	25.9	-50.5	-36.8	0.2	0.2	4.2	3.7
12.1	12.7	na	na	na	na	na	na	na	na
12.1	12.2	0.8	-13.5	na	na	0.5	0.6	3.8	3.9
11.7	11.6	9.0	21.5	-46.2	-31.6	0.2	0.4	4.2	4.4
12.4	12.1	na	na	na	na	na	na	na	na
12.5	12.9	9.6	13.9	-50.2	-41.3	0.3	0.4	4.1	4.3
12.2	12.3	na	na	-45.1	-33.1	na	na	na	na
12.3	11.9	na	na	na	na	0.1	0.1	na	na
12.3	12.8	na	na	-50.1	-46.2	0.2	0.2	5.3	5.1
12.0	12.2	5.0	10.3	-51.3	-41.2	0.2	0.2	4.2	4.3
12.1	12.6	na	na	na	na	na	na	na	na
12.2	12.4	12.7	16.7	-49.6	-41.2	0.2	0.3	4.3	4.3
12.2	12.5	13.1	16.2	-50.2	-42.5				
12.0	12.2	4.5	5.2	-46.1	-36.6				
12.5	12.9	22.0	32.5	-45.1	-31.6	0.5	0.6	5.3	5.1
11.7	11.6	0.8	-13.5	-55.2	-47.5	0.1	0.1	3.8	3.7
0.2	0.4	7.4	13.9	2.8	5.8	0.1	0.1	0.4	0.5
11.8	12.2	15.0	18.0						
11.9	12.5								

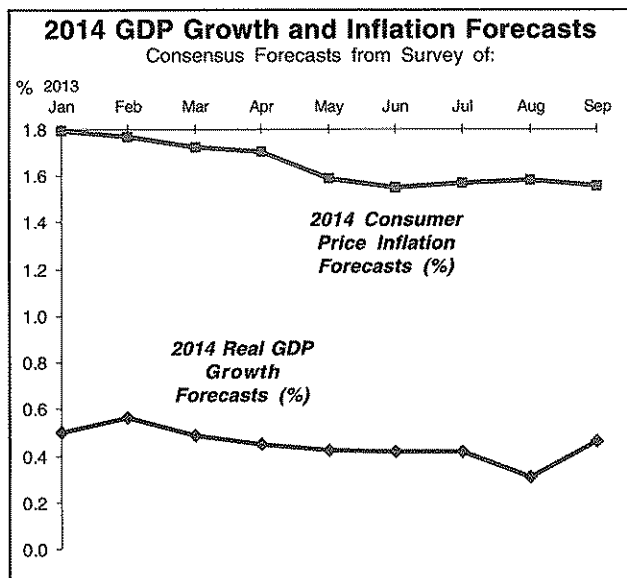
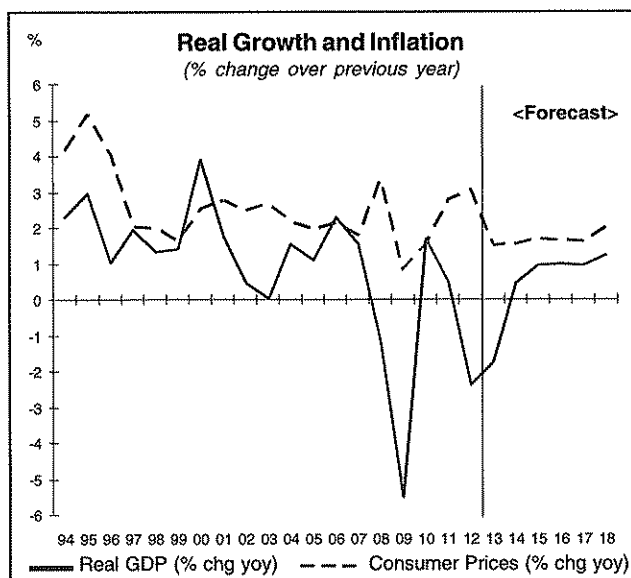
### Improving Labour Market Bolsters Outlook

The Q2 national accounts (released on September 10) recorded a 0.3% (q-o-q) fall in GDP, down from the -0.6% figure reported in Q1 and stoking expectations of a return to growth later this year. The pace of decline in household consumption and gross fixed investment also slowed to -0.4% (q-o-q) and -0.3%, respectively. Shattered domestic demand has subtracted from activity throughout the current eight-quarter recession. Indeed, even in June of this year, retail sales continued to drop by a greater-than-anticipated 3.0% (y-o-y), and by 0.2% (m-o-m). However, an improving job market, together with rising consumer confidence and above-inflation wage growth, could support household spending over the coming months. The unemployment rate fell for a second successive month by 0.1%-points to 12.0% in July, suggesting that recent labour market reforms (which include tax breaks for firms that offer employees permanent contracts) could have encouraged some new hiring. Elsewhere, the PMI for manufacturing rose to a 27-month high of 51.3 in August, supported by a surge in new orders which reflected more robust export demand. However, the future of Italian politics remains somewhat in limbo, and prime minister Enrico Letta has warned that the collapse of his coalition would undermine any recovery. Silvio Berlusconi could be banned from holding political office again after losing his final appeal against a tax fraud conviction last month, fuelling speculation that his centre-right party could withdraw its support for the coalition. Still, our panel's forecasts for 2013 GDP growth has edged up slightly this month – to -1.7%.

Inflation slowed to 1.1% (y-o-y) in August from 1.2% in July, owing to moderations in food and communication prices.

### Direction of Trade – 2012

Major Export Markets (% of Total)		Major Import Suppliers (% of Total)	
Germany	12.8	Germany	15.7
France	11.3	France	8.9
United States	6.6	China	7.0
EU	54.7	EU	56.8
Eastern Europe	13.6	Eastern Europe	14.0
Middle East	5.1	Asia (ex. Japan)	10.3





	Average % Change on Previous Calendar Year														Annual Total	
	Gross Domestic Product		Personal Expenditure		Machinery & Equipment Investment		Net Operating Surplus: Corporations		Industrial Production		Consumer Prices		Industrial Product Prices		Average Hourly Earnings	Housing Starts (thousand units)
	Produit Intérieur Brut	Dépenses de Consommation des Ménages	Investissement Productif	Excédent d'exploitation net: sociétés	Production Industrielle	Prix à la Consommation	Prix des Produits Industriels	Rémunération Horaire Moyenne	Construction de Logements mises en chantier, milliers							
Economic Forecasters	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014
Royal Bank of Canada	1.8	2.8	2.2	2.5	1.1	5.4	-5.4	4.6	na	na	1.1	1.8	na	na	na	174
Conf Board of Canada	1.7	2.4	1.9	2.2	2.6	5.7	-4.3	5.1	na	na	1.3	2.2	1.2	1.2	na	184
Desjardins	1.7	2.4	2.2	2.0	0.7	2.9	-3.6	5.1	na	na	1.1	1.7	1.1	2.4	2.8	171
Economap	1.7	2.3	2.3	2.3	1.3	7.5	-4.0	5.0	0.5	2.0	1.1	1.7	1.1	2.2	2.2	180
EDC Economics	1.7	2.0	1.8	1.6	1.9	6.4	na	na	na	na	1.4	1.8	na	na	na	150
JP Morgan	1.7	2.2	2.3	2.5	1.3	5.7	na	na	0.7	1.9	1.2	1.9	1.1	2.6	na	na
Toronto Dominion Bank	1.7	2.4	2.3	2.3	0.7	2.9	-5.7	5.1	na	na	1.1	1.7	na	na	na	179
CIBC World Markets	1.7	2.3	2.2	1.9	1.3	7.6	na	na	na	na	1.2	2.0	na	na	na	179
IHS Global Insight	1.7	2.4	2.2	2.4	0.8	3.9	-0.4	7.8	0.8	2.3	1.0	1.9	0.9	1.2	na	182
Scotia Economics	1.7	2.3	2.3	2.4	0.9	4.7	-5.9	4.6	0.4	1.9	1.2	1.9	na	na	na	170
BMO Capital Markets	1.6	2.3	2.3	2.3	1.3	6.3	-7.0	5.0	0.4	1.8	1.1	1.7	1.0	1.3	2.5	180
Econ Intelligence Unit	1.6	2.2	1.8	2.0	na	na	na	na	1.5	2.3	1.0	1.6	na	na	na	na
Informetrica	1.6	2.4	2.0	2.1	0.5	4.0	-7.5	5.0	-0.5	2.6	1.2	2.0	1.0	2.0	2.1	175
National Bank of Canada	1.6	2.3	2.1	2.1	1.2	5.1	-6.2	3.9	na	na	1.1	1.6	na	na	na	170
University of Toronto	1.6	2.6	2.2	2.3	0.5	4.6	-6.7	2.1	na	na	1.1	1.8	na	na	na	172
Capital Economics	1.5	1.0	1.6	1.3	1.0	1.4	na	na	na	na	0.8	1.0	na	na	na	150
Consensus (Mean)	1.7	2.3	2.1	2.1	1.1	4.9	-5.2	4.8	0.5	2.1	1.1	1.8	1.1	1.8	2.4	173
Last Month's Mean	1.7	2.2	1.8	2.0	1.8	5.3	-2.1	4.8	1.4	2.4	1.1	1.8	0.9	1.9	2.6	172
3 Months Ago	1.7	2.4	1.8	2.1	1.9	5.9	-1.7	5.3	2.0	2.5	1.3	1.9	1.2	2.0	2.6	171
High	1.8	2.8	2.3	2.5	2.6	7.6	-0.4	7.8	1.5	2.6	1.4	2.2	1.2	2.6	2.8	184
Low	1.5	1.0	1.6	1.3	0.5	1.4	-7.5	2.1	-0.5	1.8	0.8	1.0	0.9	1.2	2.1	150
Standard Deviation	0.1	0.4	0.2	0.3	0.5	1.7	2.0	1.3	0.6	0.3	0.1	0.3	0.1	0.6	0.3	11
Comparison Forecasts																
IMF (July '13)	1.7	2.2														
OECD (May '13)	1.4	2.3	2.0	2.5							1.3	1.7				

## Government and Background Data

**Prime Minister** - Mr. Stephen Harper (Conservative). **Government** - The Conservatives hold 167 out of 308 seats in parliament (155 seats are needed for a clear majority). **Next Election** - by May 2015 (general election). **Nominal GDP** - C\$1,818bn (2012). **Population** - 34.8mn (mid-year, 2012). **C\$/US\$ Exchange Rate** - 0.999 (average, 2012).

## Quarterly Consensus Forecasts

Historical Data and Forecasts (bold *italics*) From Survey of September 9, 2013

	2013				2014				2015			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Gross Domestic Product	1.4	1.4	1.8	2.1	2.2	2.3	2.4	2.5	2.6	2.6		
Personal Expenditure	1.8	2.5	2.3	2.3	2.5	2.1	2.2	2.3	2.5	2.5		
Consumer Prices	0.8	0.7	1.3	1.6	1.6	1.8	1.9	2.0	1.9	2.0		

Percentage Change (year-on-year).

## Historical Data

* % change on previous year	2009	2010	2011	2012
Gross Domestic Product*	-2.7	3.4	2.5	1.7
Personal Expenditure*	0.3	3.5	2.3	1.9
Machinery & Eqpt Investment*	-21.2	10.6	8.6	5.2
Net Operating Surplus: Corporations*	33.3	31.6	11.3	-4.9
Industrial Production*	-10.9	6.3	3.8	1.0
Consumer Prices*	0.3	1.8	2.9	1.5
Industrial Product Prices*	-3.5	1.0	4.6	0.6
Average Hourly Earnings*	3.0	3.0	2.0	2.0
Housing Starts, '000 units	149	190	194	215
Unemployment Rate, %	8.3	8.0	7.5	7.3
Current Account, C\$ bn	-45.8	-58.4	-48.5	-62.2
Federal Govt Budget Balance, fiscal years, C\$ bn	-55.6	-33.4	-26.2	-21.7 e
3 mth Trsy Bill, % (end yr)	0.2	1.0	0.8	0.9
10 Yr Govt Bond, % (end yr)	3.6	3.2	1.9	1.8

e = consensus estimate based on latest survey

Year Average	Annual Total	Fiscal Years (Apr-Mar)	Rates on Survey Date			
			1.0%		2.8%	
Unemployment Rate (%)	Current Account (C\$ bn)	Federal Govt Budget Balance (C\$ bn)	3 month Treasury Bill Rate (%)	10 Year Government Bond Yield (%)		
Taux de Chômage (%)	Balance Courante (C\$ md)	Balance Budgétaire (C\$ md)	Rendement sur les Bons du Trésor de 3 mois %	Rendement des Obligations d'État de 10 ans %		
2013 2014	2013 2014	FY 13-14 FY 14-15	End Dec'13 End Sep'14	End Dec'13 End Sep'14		
7.1 6.8	-49.4 -39.6	na na	1.0 1.3	2.8 3.3		
7.1 7.0	-54.0 -50.0	-11.0 -5.0	1.0 1.2	1.9 2.2		
7.1 7.1	-51.5 -33.7	-15.0 -5.0	1.0 1.0	2.9 3.1		
7.1 6.8	-55.0 -49.0	-16.0 -7.0	1.0 1.0	2.8 3.3		
7.1 7.0	-53.0 -42.0	na na	na na	na na		
7.1 7.0	-59.1 -58.6	na na	na na	na na		
7.1 6.8	-53.6 -62.5	na na	1.0 1.1	2.8 3.1		
7.1 6.8	-59.2 -52.3	na na	1.0 1.0	2.7 2.9		
7.1 7.0	-54.0 -42.4	na na	1.0 1.1	2.8 3.0		
7.1 7.0	-55.6 -48.7	-18.0 -8.0	1.0 1.0	2.8 3.3		
7.1 6.8	-57.0 -54.0	-19.0 -12.0	1.0 1.3	2.8 3.4		
7.0 6.5	-57.1 -55.3	na na	na na	na na		
7.1 6.9	-54.0 -52.0	-15.5 -6.5	1.0 1.4	2.7 3.4		
7.2 7.1	-56.0 -47.0	-16.2 -9.0	1.0 1.2	2.8 3.4		
7.1 7.0	-56.5 -52.0	na na	1.0 1.1	3.0 3.3		
7.3 8.0	na na	na na	1.0 1.0	2.5 2.8		
7.1 7.0	-55.0 -49.3	-15.8 -7.5	1.0 1.1	2.7 3.1		
7.1 7.0	-55.2 -48.5	-16.1 -7.6				
7.1 6.9	-53.6 -46.2	-16.1 -9.1				
7.3 8.0	-49.4 -33.7	-11.0 -5.0	1.0 1.4	3.0 3.4		
7.0 6.5	-59.2 -62.5	-19.0 -12.0	1.0 1.0	1.9 2.2		
0.1 0.3	2.7 7.5	2.6 2.5	0.0 0.1	0.3 0.3		
7.1 6.9						

**Investment, Profits, Production Forecasts Downgraded**  
 Hopes of an export-driven recovery are fading following a poor showing from externally-oriented industry in June. According to the output-based GDP report, manufacturing fell by 1.3% (m-o-m) in June after three straight months of flat growth, while industrial production declined by 0.8% following a 0.7% tumble in May and 0.6% fall in April. A drop in mining, quarrying, oil & gas extraction did not help, but it was mainly a 2.6% contraction in durables output which dictated the overall decline. GDP as a whole reported a 0.5% (m-o-m) fall in June after May's 0.2% rise. On a quarterly basis (more of which below), net trade was a drag on growth. Moreover, the trade deficit doubled from C\$-460mn in June to C\$-931mn in July, due to a large drop in orders for aircraft and their components. 2013 current account forecasts remain relatively stable, however, although those for industrial production have been sharply downgraded. Still, one-off events weighing on the Q2 outturn (namely the Quebec construction strike and floods in Alberta) have left many cautious about pointing to a definitively weak trend, and consequently the 2013 GDP consensus has stayed at 1.7% this month.

At odds with June GDP, Q2 advanced by 0.4% (q-o-q) on the back of a 0.5% jump in Q1 and, in y-o-y terms, maintained the previous quarter's solid 1.4% pace. Personal expenditure was the main motor of activity, accelerating from +0.3% (q-o-q) in Q1 to 0.9% and from 1.8% (y-o-y) to 2.5%. Consumers lifted their purchases of vehicles by 4.7% over the quarter. Still, the pace of this may not be sustainable going forward. Moreover, investment was weak, inventories slowed and profits fell by 4.4% (q-o-q). With business sentiment so uncertain, this could impact on hiring intentions further down the line.

**Canada Overnight Lending Rate – Sep. 9, 2013 = 1.00%**

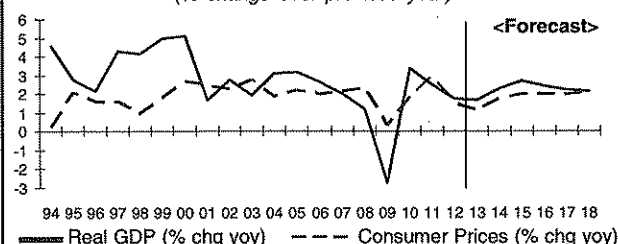
FORECASTS	End Sep. 2013	End Dec. 2013	End Mar. 2014	End June 2014
<b>Consensus Mean Average:</b>	1.00%	1.00%	1.03%	1.05%
<b>Mode (most frequent forecast):</b>	1.00%	1.00%	1.00%	1.00%

**Direction of Trade – 2012**
**Major Export Markets (% of Total)**

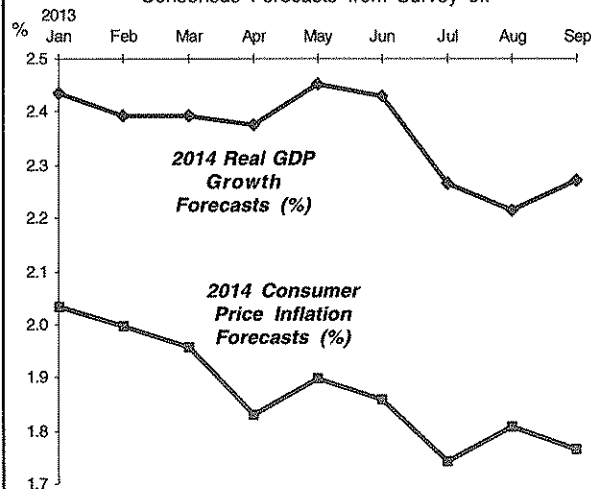
United States	74.5
China	4.3
United Kingdom	4.1
EU	8.5
Asia (ex. Japan)	6.0
Latin America	3.0

**Major Import Suppliers (% of Total)**

United States	50.6
China	11.0
Mexico	5.5
Asia (ex. Japan)	14.0
EU	10.9
Latin America	9.0

**Real Growth and Inflation (% change over previous year)**

**2014 GDP Growth and Inflation Forecasts**

Consensus Forecasts from Survey of:



# EURO ZONE

SEPTEMBER 2013

The EURO ZONE is: Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Slovenia and Spain.	Average % Change on Previous Calendar Year														Year Average			
	Gross Domestic Product		Private Consumption		Govt Consumption		Gross Fixed Investment		Industrial Production		Consumer Prices (HICP)		Industrial Producer Prices		Hourly Labour Costs – Total		Unemployment Rate (%)	
Economic Forecasters	2013 2014		2013 2014		2013 2014		2013 2014		2013 2014		2013 2014		2013 2014		2013 2014		2013 2014	
Allianz	-0.2	1.5	-0.4	0.8	0.2	0.2	-3.2	2.5	-0.1	2.5	1.5	1.5	0.6	2.0	na	na	12.2	11.9
Grupo Santander	-0.3	1.1	-0.5	0.6	0.1	-0.1	-3.4	2.3	na	na	1.5	1.5	na	na	na	na	12.2	12.3
Intesa Sanpaolo	-0.3	1.1	-0.5	0.6	0.3	0.5	-3.3	1.8	-0.7	0.5	1.5	1.6	0.2	1.0	2.0	2.1	12.1	11.8
AXA Investment Managers	-0.3	1.0	-0.5	0.7	0.2	0.0	-3.5	1.0	na	na	1.4	1.6	na	na	na	na	12.1	12.0
Bank Julius Baer	-0.3	1.0	-0.2	0.6	0.1	0.0	-3.0	2.1	0.0	3.9	1.4	1.3	0.1	0.0	1.4	0.7	12.1	11.9
JP Morgan	-0.3	1.3	-0.6	0.8	0.2	0.7	-3.6	1.3	-0.3	2.7	1.5	1.3	-0.3	na	na	na	12.2	12.3
Nomura	-0.3	0.3	-0.7	-0.5	0.3	-0.1	-4.0	-2.0	na	na	1.5	1.4	na	na	na	na	12.2	12.4
Societe Generale	-0.3	0.6	-0.6	0.2	0.4	0.3	-3.7	0.1	na	na	1.5	1.4	na	na	na	na	12.2	12.7
UniCredit	-0.3	1.0	-0.6	0.5	0.1	-0.2	-3.5	1.4	na	na	1.5	1.6	0.3	2.0	na	na	12.2	12.3
Morgan Stanley	-0.3	0.9	-0.6	0.2	0.1	0.3	-4.0	-0.3	na	na	1.5	1.6	na	na	na	na	12.1	12.3
Oxford Economics	-0.3	0.9	-0.6	0.5	0.0	-0.2	-3.7	1.4	-0.8	1.7	1.6	1.5	0.3	1.6	na	na	12.2	12.5
Credit Agricole	-0.3	1.0	-0.8	0.6	0.0	-0.2	-3.7	1.3	na	na	1.5	1.5	na	na	na	na	12.3	12.5
BNP Paribas	-0.4	1.0	-0.5	0.6	0.2	0.1	-3.4	0.8	-0.3	3.2	1.5	1.3	na	na	na	na	12.3	12.8
European F'cast Network	-0.4	1.1	-0.6	0.6	0.1	0.0	-4.0	1.8	0.1	2.6	1.5	1.4	na	na	1.8	1.9	12.2	12.4
Moody's Analytics	-0.4	1.3	-0.5	1.1	0.0	0.2	-3.7	2.0	-0.7	1.3	1.4	1.9	0.0	1.7	na	na	12.5	12.4
BBVA	-0.4	1.0	-0.4	0.6	-0.4	0.3	-3.6	2.3	na	na	1.5	1.4	na	na	na	na	12.2	12.3
Bank of America - Merrill	-0.5	0.6	-0.9	0.1	-0.6	-0.8	-4.2	0.2	-0.5	1.8	1.5	1.4	na	na	na	na	12.1	12.0
Citigroup	-0.5	0.6	-0.4	0.3	-0.3	-0.2	-4.0	0.6	0.0	0.9	1.5	1.4	na	na	na	na	12.2	12.3
Commerzbank	-0.5	0.7	-0.6	0.5	0.2	0.5	-3.6	2.1	-0.1	2.5	1.5	1.5	0.2	1.6	2.3	2.5	12.2	12.5
Credit Suisse	-0.5	1.2	-0.7	0.5	-0.2	0.3	-2.9	3.7	na	na	1.5	1.5	na	na	na	na	12.3	12.2
ETLA	-0.5	0.9	-0.8	0.8	-0.3	0.4	-2.5	1.9	-1.4	1.1	1.8	1.7	na	na	na	na	12.3	12.3
Goldman Sachs	-0.5	0.9	-1.0	0.2	-0.1	-0.5	-4.2	-0.1	na	na	1.5	1.5	na	na	na	na	12.3	12.5
IHS Global Insight	-0.5	0.8	-0.6	0.6	0.1	0.5	-3.6	1.7	-0.7	1.9	1.5	1.6	0.7	1.9	1.9	2.1	12.2	12.3
HSBC	-0.6	0.6	-0.6	0.2	-0.4	-0.3	-3.8	0.5	-0.2	2.6	1.4	1.3	na	na	na	na	12.3	12.4
Natixis	-0.6	0.7	-0.6	0.1	-0.2	0.0	-3.8	0.9	na	na	1.5	1.5	na	na	na	na	12.1	12.4
UBS	-0.7	0.8	-0.6	0.6	-0.4	-0.3	-3.8	1.6	na	na	1.5	1.5	1.9	3.1	na	na	12.3	12.2
Econ Intelligence Unit	-0.7	0.5	-1.1	0.3	-0.2	0.2	-3.4	1.3	-1.3	0.6	1.4	1.4	0.6	1.7	na	na	12.2	12.3
Consensus (Mean)	-0.4	0.9	-0.6	0.5	0.0	0.1	-3.6	1.3	-0.5	2.0	1.5	1.5	0.4	1.7	1.9	1.9	12.2	12.3
Last Month's Mean	-0.6	0.9	-0.7	0.4	-0.3	0.0	-3.6	1.3	-0.8	2.1	1.5	1.5	0.5	1.7	2.0	1.9	12.2	12.3
3 Months Ago	-0.6	0.8	-0.7	0.4	-0.4	-0.1	-3.2	1.2	-0.8	2.2	1.5	1.5	1.0	1.9	1.9	1.9	12.3	12.4
High	-0.2	1.5	-0.2	1.1	0.4	0.7	-2.5	3.7	0.1	3.9	1.8	1.9	1.9	3.1	2.3	2.5	12.5	12.8
Low	-0.7	0.3	-1.1	-0.5	-0.6	-0.8	-4.2	-2.0	-1.4	0.5	1.4	1.3	-0.3	0.0	1.4	0.7	12.1	11.8
Standard Deviation	0.1	0.3	0.2	0.3	0.3	0.3	0.4	1.1	0.5	1.0	0.1	0.1	0.6	0.8	0.3	0.7	0.1	0.2
Comparison Forecasts																		
Eur Commission (May '13)	-0.4	1.2	-0.9	0.7	0.0	0.5	-2.6	2.3			1.6	1.5					12.2	12.1
ECB - midpoint (June '13)	-0.6	1.1	-0.8	0.6	-0.1	0.6	-2.9	1.8			1.4	1.3						
IMF (July '13)	-0.6	0.9																
OECD (May '13)	-0.6	1.1	-0.8	0.4	0.0	0.3	-3.0	1.3			1.5	1.2					12.1	12.3

## European Monetary Union

**Euro zone** - The seventeen European countries (listed at the top of this page) are united by a common currency (the euro), monetary policy and adherence to the Maastricht Treaty. **Monetary Policy** - is set by the European Central Bank's (ECB) governing board, headed by Mario Draghi. **Nominal GDP** - Euro 9,490bn (2012). **Population** - 331.4mn (mid-year, 2012). **\$/Euro Exchange Rate** - 1.286 (average, 2012).

## Quarterly Consensus Forecasts

Historical Data and Forecasts (bold italics) From Survey of September 9, 2013

	2013				2014				2015			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Gross Domestic Product	-1.0	-0.5	-0.3	0.4	0.8	0.8	1.0	1.1	1.3	1.3		
Private Consumption	-1.3	-0.6	-0.5	0.2	0.4	0.4	0.5	0.6	0.9	1.0		
Consumer Prices	1.9	1.4	1.4	1.4	1.3	1.6	1.5	1.4	1.6	1.6		

Percentage Change (year-on-year).

## Historical Data

* % change on previous year	2009	2010	2011	2012
Gross Domestic Product*	-4.4	1.9	1.6	-0.6
Private Consumption*	-0.9	1.0	0.3	-1.4
Government Consumption*	2.6	0.6	-0.1	-0.6
Gross Fixed Capital Formation*	-12.7	-0.5	1.7	-3.7
Industrial Production*	-15.1	7.3	3.2	-2.3
Consumer Prices*	0.3	1.6	2.7	2.5
Industrial Producer Prices*	-4.8	2.7	5.8	3.0
Hourly Labour Costs – Total*	2.7	1.7	2.6	2.1
Unemployment Rate, (%)	9.6	10.1	10.2	11.4
Exports - Goods & Services*	-12.4	11.5	6.5	2.7
Imports - Goods & Services*	-11.0	9.9	4.5	-1.0
Current Account, Euro bn	-13.5	3.5	14.9	122
General Govt. Budget Balance (Maastricht definition), Euro bn	-567	-569	-389	-354
Money Supply, M3, end period*	-0.3	1.1	1.6	3.5

Average % Change on Previous Calendar Year				Annual Total				Average % Change on Prev. Year	
Exports of Goods & Services		Imports of Goods & Services		Current Account (€ bn)		General Govt Budget Balance (Maastricht) (€ bn)		Money Supply, M3, end period	
2013	2014	2013	2014	2013	2014	2013	2014	2013	2014
1.2	4.8	0.2	4.0	197	165	-280	-250	na	na
0.9	3.8	-0.3	3.4	140	80	-274	-233	na	na
1.4	4.4	0.0	4.4	172	135	-307	-296	3.5	3.7
0.9	3.6	-0.2	2.9	na	na	na	na	na	na
0.8	4.4	0.4	4.4	na	na	na	na	na	na
1.1	4.2	0.0	3.9	213	199	na	na	na	na
0.8	2.8	-0.6	1.7	na	na	na	na	na	na
0.8	3.4	-0.2	3.2	198	201	-312	-268	na	na
1.2	4.6	0.0	4.4	na	na	na	na	na	na
0.8	3.2	-0.4	2.8	222	218	-297	-284	na	na
1.0	3.6	-0.5	2.9	206	204	-267	-237	na	na
1.2	4.1	-0.1	3.7	219	226	-296	-251	na	na
1.0	4.8	0.0	4.5	155	170	-293	-250	na	na
1.3	5.9	1.1	5.9	na	na	na	na	na	na
0.0	3.0	-1.6	3.3	28	-9	na	na	1.9	3.8
1.0	3.8	-0.5	3.7	na	na	na	na	na	na
0.3	4.6	-1.5	3.6	175	178	-284	-262	na	na
0.7	2.8	-0.7	2.3	242	224	-281	-241	na	na
1.2	4.4	-1.0	4.0	200	80	-307	-260	2.4	3.0
0.6	4.7	-1.0	3.9	192	196	-280	-244	na	na
2.2	2.7	0.9	4.1	na	na	na	na	na	na
-0.2	2.5	-1.2	1.3	122	137	na	na	na	na
1.4	3.3	0.0	3.3	185	181	-297	-250	2.5	4.2
0.2	2.6	-1.2	2.0	na	na	na	na	na	na
0.9	3.1	-0.5	2.6	140	80	-290	-280	2.5	3.5
0.2	3.2	-1.5	2.6	188	341	na	na	2.6	1.4
1.1	2.3	-0.1	2.3	na	na	-313	-281	na	na
0.9	3.7	-0.4	3.4	177	167	-292	-259	2.6	3.3
0.5	3.7	-0.9	3.2	156	163	-281	-246	2.6	3.3
1.0	3.6	-0.4	2.9	165	176	-278	-238	3.1	3.9
2.2	5.9	1.1	5.9	242	341	-267	-233	3.5	4.2
-0.2	2.3	-1.6	1.3	28	-9	-313	-296	1.9	1.4
0.5	0.9	0.7	1.0	49	77	14	19	0.5	1.0
2.2	4.9	0.5	4.7	241	261				
0.8	4.1	-0.7	3.8						

## GDP Exits From Recession

The GDP outlook has improved modestly on the back of confirmation that the economy exited its longest recession on record in Q2. GDP grew by 0.3% (q-o-q) after six straight quarters of decline. All expenditure-based components helped to support activity, including exports, domestic demand and a 0.4% (q-o-q) rise in government consumption. This suggests that austerity is easing. A broadening – if muted – Euro zone recovery was also evidenced in August's PMIs for the service and manufacturing sectors. Meanwhile, industrial production jumped from a May contraction to +0.7% (m-o-m) in June and soared by 1.2% (q-o-q) for Q2 as a whole, lifting our panel's 2013 forecast. A soft 0.1% (m-o-m) increase in retail sales points to lingering fragility in the recovery, though.

## Euro Zone Interest Rates

Forecasts are provided by a total of more than 80 panelists for **Germany** (page 9), **France** (page 11), **Italy** (page 15), the **Netherlands** (page 20) and **Spain** (page 22). This allows the analysis of forecasts for different yields on individual country 10-year benchmark bonds. Forecasts for 3-month interest rates are all for the EURIBOR rate.

	Actual	Consensus	
	Sep. '13	End Dec. '13	End Sep. '14
Euribor, 3-mth, %	0.2	0.2	0.3
German 10-yr			
Govt Bond, %	2.0	1.8	2.1

## Euro zone Refinancing Rate – Sep. 9, 2013 = 0.50%

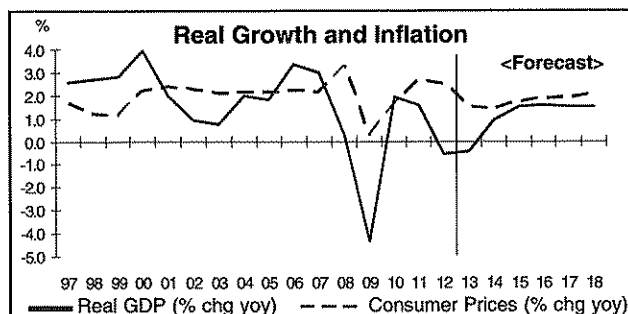
FORECASTS	End Sep. 2013	End Dec. 2013	End Mar. 2014	End June 2014
Consensus				
Mean Average:	0.51%	0.46%	0.46%	0.46%
Mode (most frequent forecast):	0.50%	0.50%	0.50%	0.50%

## Euro Exchange Rates

Consensus forecasts from a survey of approximately 100 panellists are shown on page 27.

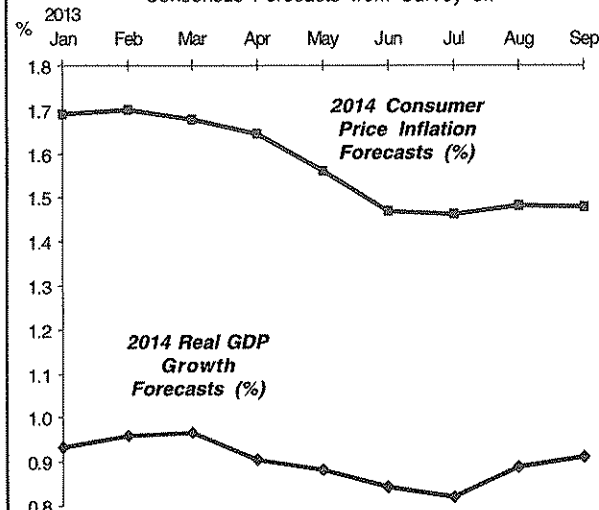
## Euro Zone Economic Statistics

The source of all Historical Data (facing page) is Eurostat, with the exception of the Current Account and the Money Supply, M3, which are from the European Central Bank. The base years and statistics methodologies used by Eurostat may differ from those used by individual Euro zone-member countries included in Consensus Forecasts. Eurostat data is often drawn from the national statistical agencies within the Euro zone but is adjusted to achieve standard classifications.



## 2014 GDP Growth and Inflation Forecasts

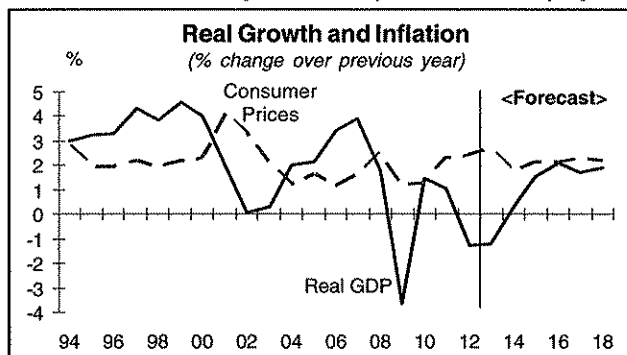
Consensus Forecasts from Survey of:



	Average % Change on Previous Calendar Year										Annual Total				Rates on Survey Date					
	Gross Domestic Product		Private Consumption		Gross Fixed Investment		Manufacturing Production		Consumer Prices		Hourly Wages (Manufacturing)		Current Account (€ bn)		General Govt Bud Bal (Maastricht) (€ bn)		0.2%		2.4%	
																	3 month Euro Rate (%)		10 Year Dutch Govt Bond Yield (%)	
Economic Forecasters	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	End Dec'13	End Sep'14	End Dec'13	End Sep'14		
UBS	-1.0 1.0	-0.8 0.3	-8.9 3.4	na na	2.7 1.9	na na	60.0 60.0	-20.5 -21.4	0.2 0.2	2.3 2.3										
Moody's Analytics	-1.0 0.4	-1.6 -0.2	-8.2 1.4	na na	2.6 1.9	na na	62.8 71.4	na na	0.5 0.6	1.9 2.1										
ABN AMRO	-1.1 0.4	-2.0 -1.0	-8.3 0.0	-0.5 1.5	2.7 1.8	1.7 1.8	62.0 62.5	-18.0 -18.2	0.2 0.2	2.3 2.8										
Feri EuroRating	-1.2 0.5	-2.1 0.0	-7.9 1.4	-1.3 1.9	2.5 1.9	1.3 2.1	57.5 49.8	-22.4 -22.6	0.3 0.8	2.1 2.9										
Nomura	-1.2 0.2	-2.2 -1.5	-8.6 -0.5	na na	na na	na na	na na	na na	0.2 0.2	na na										
Rabobank Nederland	-1.3 0.0	-2.1 -1.5	-9.1 -1.1	na na	2.8 1.6	na na	75.2 82.1	-18.5 -20.4	0.2 0.3	2.3 2.6										
Bank of America - Merrill	-1.3 0.0	-2.1 -0.8	-8.8 -0.2	na na	2.5 1.7	na na	69.7 64.7	-20.5 -18.5	na na	na na										
ING	-1.3 0.1	-2.0 -1.1	-8.6 -0.1	-1.3 2.5	2.7 1.7	1.9 1.8	78.0 65.0	-19.9 -19.5	0.2 0.5	2.3 2.5										
Theodoor Gilissen	-1.3 0.8	-2.0 -0.1	-8.5 2.0	-0.7 2.8	2.6 1.6	1.3 2.1	na na	-24.0 -21.0	0.2 0.5	2.1 2.4										
Econ Intelligence Unit	-1.3 0.3	-2.1 -0.9	-8.0 -2.0	na na	2.8 1.8	na na	na na	na na	na na	na na										
NIBC	-1.4 -0.2	-2.0 -0.6	-8.5 -1.0	-1.2 0.5	2.7 1.7	1.8 1.2	65.0 65.0	-20.0 -25.0	0.2 0.2	2.5 2.8										
Consensus (Mean)	-1.2 0.3	-1.9 -0.7	-8.5 0.3	-1.0 1.8	2.7 1.8	1.6 1.8	66.3 65.1	-20.5 -20.8	0.2 0.4	2.2 2.6										
Last Month's Mean	-1.2 0.5	-1.3 -0.4	-9.1 0.0	-1.0 1.2	2.6 1.7	1.6 1.8	65.0 61.7	-20.8 -20.7												
3 Months Ago	-0.8 0.6	-1.3 -0.3	-6.6 0.6	-1.2 0.8	2.5 1.8	1.8 1.9	54.6 52.9	-21.5 -20.3												
High	-1.0 1.0	-0.8 0.3	-7.9 3.4	-0.5 2.8	2.8 1.9	1.9 2.1	78.0 82.1	-18.0 -18.2	0.5 0.8	2.5 2.9										
Low	-1.4 -0.2	-2.2 -1.5	-9.1 -2.0	-1.3 0.5	2.5 1.6	1.3 1.2	57.5 49.8	-24.0 -25.0	0.2 0.2	1.9 2.1										
Standard Deviation	0.1 0.4	0.4 0.6	0.4 1.6	0.4 0.9	0.1 0.1	0.3 0.4	7.3 9.2	1.9 2.2	0.1 0.2	0.2 0.3										
Comparison Forecasts																				
CPB (Sep. '13)	-1.2 0.7	-2.2 -0.7			2.8 2.1															
Eur Commission (May '13)	-0.8 0.9	-2.4 -0.1	-3.3 1.6		2.8 1.5		52.1 55.3													
IMF (Apr. '13)	-0.5 1.1				2.8 1.7															
OECD (May '13)	-0.9 0.7	-2.5 -0.1	-3.1 -0.1		2.7 1.5															

◆ GDP shrank by 0.2% (q-o-q) – and by 2.0% (y-o-y) – in Q2 as rising unemployment stifled consumer spending, increasing pressure on the government to do more to drive growth. Private consumption slumped by 0.8% (q-o-q) in Q2, and while gross fixed investment rebounded by 1.1% (q-o-q), this represented a 9.5% plunge in y-o-y terms.

◆ Recovery prospects darkened further after the government last month approved a €6bn austerity package for next year. Details will be given in the 2014 budget on September 17, although measures could include health care cuts and salary freezes for public sector employees.



#### Historical Data

* % change on previous year	2009	2010	2011	2012
<b>Gross Domestic Product*</b>	-3.7	1.5	1.0	-1.3
<b>Private Consumption*</b>	-2.1	0.3	-1.1	-1.6
<b>Gross Fixed Investment*</b>	-12.0	-7.4	6.1	-4.0
<b>Manufacturing Production*</b>	-8.7	7.0	3.3	-0.8
<b>Consumer Prices*</b>	1.2	1.3	2.3	2.5
<b>Hourly Wages (manufacturing)*</b>	2.8	1.2	1.2	1.8
<b>Current Account, transactions basis, Euro bn</b>	29.7	45.7	61.0	60.5
<b>General Govt. Budget Balance (Maastricht definition), Euro bn</b>	-32.1	-30.1	-27.0	-24.4
<b>3 mth Euro, % (end yr)</b>	0.7	1.0	1.4	0.2
<b>10 Yr Dutch Govt Bond Yield, % (end yr)</b>	3.6	3.2	2.2	1.5

Nominal GDP - Euro 599.7bn (2012). Popn - 16.7mn (mid-year, 2012). \$/Euro Exch. Rate - 1.286 (average, 2012).

#### Quarterly Consensus Forecasts

Historical Data and Forecasts (bold *italics*) From Survey of September 9, 2013

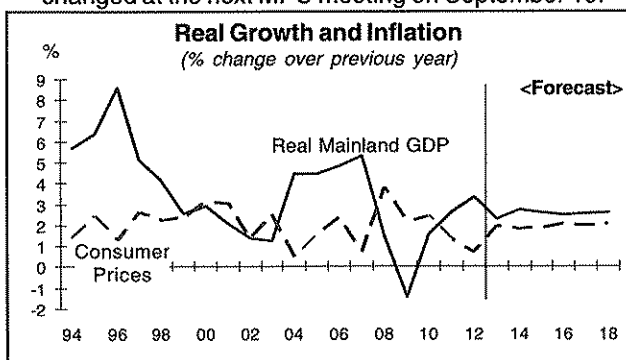
	2013				2014				2015			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>Gross Domestic Product</b>	-1.4	-2.0	-1.1	-0.4	0.0	0.2	0.5	0.7	1.1	1.3		
<b>Consumer Prices</b>	3.0	2.8	2.8	2.0	1.8	1.9	1.5	1.8	1.6	1.6		

Percentage Change (year-on-year)

	Average % Change on Previous Calendar Year										Annual Total		Rates on Survey Date			
	Gross Domestic Product (Main-land)	Private Con- sumption	Gross Fixed Invest- ment	Manufac- turing Produc- tion	Con- sumer Prices	Wages & Salaries	Current Account (Nkr bn)	General Govt Budget Balance (Nkr bn)	1.7%		3.1%					
									3 month Interbank Rate (%)		10 Year Govt Bond Yield (%)					
Economic Forecasters	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	End Dec'13	End Sep'14	End Dec'13	End Sep'14			
Goldman Sachs	2.7 3.4	3.6 4.2	7.0 6.2	na na	2.0 1.9	na na	na na	na na	na na	na na	na na	na na	na na			
Bank of America - Merrill	2.5 2.7	na na	4.5 1.1	na na	1.7 1.6	na na	na na	na na	na na	na na	na na	na na	na na			
NYKredit	2.5 3.2	3.1 3.1	6.8 5.8	na na	1.7 1.8	3.7 3.8	na na	na na	na na	na na	na na	na na	na na			
Statistics Norway	2.4 3.0	3.5 4.3	5.4 4.0	na na	1.8 1.9	3.7 3.8	320 275	na na	1.8 1.9	na na	na na	na na	na na			
UBS	2.3 2.8	2.9 3.3	6.7 6.3	na na	1.9 1.6	na na	353 385	401 500	1.8 1.8	2.5 2.5	na na	na na	na na			
Citigroup	2.2 2.6	3.0 3.1	na na	na na	1.7 1.5	na na	398 380	na na	na na	2.6 2.7	na na	na na	na na			
Feri EuroRating	2.2 2.8	2.5 3.3	7.2 5.4	4.2 2.1	2.1 1.9	3.9 3.8	368 382	391 390	1.8 2.1	2.7 2.9	na na	na na	na na			
DNB	2.0 2.0	2.7 3.1	5.2 3.4	4.0 1.5	2.1 2.1	3.6 3.5	400 370	330 300	1.8 1.8	2.9 3.2	na na	na na	na na			
Nordea Markets	2.0 2.3	2.6 2.4	5.7 1.6	na na	2.2 1.6	3.6 3.7	336 391	340 380	1.7 2.0	2.9 3.4	na na	na na	na na			
Swedbank	2.0 2.5	2.5 2.2	4.9 0.3	4.4 3.0	2.2 2.0	4.0 3.8	344 373	369 326	1.8 1.8	3.2 3.4	na na	na na	na na			
Consensus (Mean)	2.3 2.7	2.9 3.2	5.9 3.8	4.2 2.2	1.9 1.8	3.8 3.7	360 365	366 379	1.8 1.9	2.8 3.0	na na	na na	na na			
Last Month's Mean	2.4 2.7	3.0 3.3	5.2 3.6	3.4 2.3	1.8 1.7	3.7 3.7	356 355	372 379								
3 Months Ago	2.5 2.7	3.0 3.3	5.3 3.9	2.1 1.9	1.7 1.7	3.7 3.8	376 377	385 379								
High	2.7 3.4	3.6 4.3	7.2 6.3	4.4 3.0	2.2 2.1	4.0 3.8	400 391	401 500	1.8 2.1	3.2 3.4	na na	na na	na na			
Low	2.0 2.0	2.5 2.2	4.5 0.3	4.0 1.5	1.7 1.5	3.6 3.5	320 275	330 300	1.7 1.8	2.5 2.5	na na	na na	na na			
Standard Deviation	0.2 0.4	0.4 0.7	1.0 2.3	0.2 0.7	0.2 0.2	0.2 0.1	31 40	31 77	0.0 0.1	0.2 0.4	na na	na na	na na			
Comparison Forecasts																
Bank of Norway (Jun. '13)	2.5 2.8	3.0 2.8			1.8 1.5	3.5 3.8										
OECD (May '13)	2.6 3.2	3.5 3.7	5.9 6.4		1.3 1.7											

◆ Mainland GDP growth cooled to +0.2% (q-o-q) in Q2, as household spending slowed markedly. Private consumption grew by just 0.2% (q-o-q), and Q3 recovery prospects darkened after retail sales shrank for a second straight month in July by 1.1% (m-o-m). Q2 investment did rebound by 5.1% (q-o-q), however, from -2.0% in Q1.

◆ Manufacturing production unexpectedly grew by 0.1% (m-o-m) in August, following a 2.9% surge in July. Elsewhere, inflation quickened slightly to 3.2% (y-o-y) in August. Norges Bank is expected to leave monetary policy unchanged at the next MPC meeting on September 19.



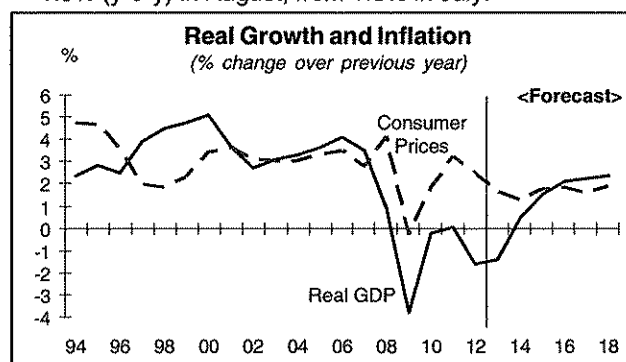
Historical Data				
* % change on previous year	2009	2010	2011	2012
GDP (Mainland)*	-1.4	1.5	2.6	3.3
Private Consumption*	-0.1	3.6	2.5	3.1
Gross Fixed Investment*	-7.5	-8.0	7.5	8.1
Manufacturing Production*	-6.4	2.8	0.9	2.8
Consumer Prices*	2.2	2.4	1.3	0.7
Wages & Salaries per Full-Time Employee (Total)*	5.0	3.1	4.1	4.0
Current Account, Nkr bn	279	303	351	412
General Govt. Bud Bal, Nkr bn	251	283	368	402
3 mth Interbank Rate, % (end year)	2.2	2.6	2.9	1.8
10 Yr Govt Bond Yield, % (end year)	4.2	3.7	2.4	2.1
Nominal GDP (total) - Nkr 2,907bn (2012). Population - 5.0mn (mid-yr, 2012). Nkr/\$ Exchange Rate - 5.818 (average, 2012).				

Quarterly Consensus Forecasts									
Historical Data and Forecasts (bold italics) From Survey of September 9, 2013									
	2013				2014				2015
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q2
Gross Domestic Product (Mainland)	2.2	1.7	2.0	2.5	2.5	2.7	2.6	2.6	2.6
Consumer Prices	1.2	2.0	2.7	2.2	2.1	1.9	1.8	1.8	1.9
Percentage Change (year-on-year)									

	Average % Change on Previous Calendar Year						Annual Total		Rates on Survey Date			
	Gross Domestic Product	Household Consumption	Gross Fixed Investment	Industrial Production	Consumer Prices	Salary Cost per Hour	Current Account (€ bn)	General Govt Bud Bal (Maastricht) (€ bn)	0.2%		4.5%	
	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	3 month Euro Rate (%)	10 Year Spanish Govt Bond Yield (%)	End Dec'13	End Sep'14
<b>Economic Forecasters</b>	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	End Dec'13	End Sep'14	End Dec'13	End Sep'14
CEOE	-1.2 0.8	-2.7 0.1	-5.9 -1.2	-2.6 1.5	1.7 1.7	na na	16.4 32.3	-71.7 -67.8	0.2 0.3	4.4 4.3		
CEPREDE	-1.2 0.9	-2.6 0.1	-6.2 -0.9	-4.2 -0.9	1.3 1.1	-0.1 0.2	10.4 20.7	-74.3 -71.2	0.6 0.8	5.1 5.6		
FUNCAS	-1.2 1.0	-2.6 0.3	-6.2 -2.1	-2.2 0.9	1.7 1.4	0.5 -0.2	18.6 30.3	-69.6 -62.3	0.2 0.3	4.4 4.3		
La Caixa	-1.2 0.8	-2.7 0.2	-6.5 -1.1	-2.1 2.1	1.7 1.4	0.7 0.8	18.0 24.7	-70.7 -64.8	0.2 0.2	4.4 3.9		
Bankia	-1.3 0.8	-2.7 -0.2	-6.7 -0.7	-1.5 na	1.7 1.6	0.3 0.3	14.8 32.3	na na	0.3 0.6	4.3 4.7		
Grupo Santander	-1.3 0.9	-2.6 0.5	-6.9 -1.2	na na	1.5 1.1	0.0 0.4	10.3 15.7	na na	0.3 0.4	4.6 4.7		
Inst L R Klein (Gauss)	-1.3 0.9	-2.5 0.4	-5.9 1.4	-2.9 2.0	1.6 1.4	-0.4 -0.2	10.9 18.8	-68.7 -62.4	0.2 0.3	4.4 4.5		
BBVA	-1.4 0.9	-2.7 -0.2	-6.2 1.1	na na	1.7 1.1	na na	10.0 18.4	-67.0 -60.6	0.3 0.5	4.5 4.7		
IFL-Univers Carlos III	-1.4 0.3	-2.7 0.5	-6.5 -1.8	-2.4 -1.9	1.5 1.5	na na	na na	na na	na na	na na		
Bank of America - Merrill	-1.4 0.3	-2.6 0.2	-6.8 -2.7	na na	1.7 1.4	na na	10.0 18.4	-73.7 -67.3	na na	na na		
Citigroup	-1.4 -0.2	-2.6 -0.6	-7.0 -1.8	na na	1.8 0.9	na na	12.0 21.5	-67.4 -61.7	0.3 0.3	na na		
UniCredit	-1.4 0.4	-2.8 0.0	-6.5 -1.1	na na	1.9 1.8	na na	10.4 22.0	-67.0 -59.0	na na	na na		
Goldman Sachs	-1.5 0.0	-2.7 -0.1	-6.5 -1.7	-5.5 -2.7	1.6 0.9	na na	12.2 22.1	-62.4 -44.9	na na	na na		
UBS	-1.6 0.2	-2.8 -0.5	-7.0 -2.7	na na	1.8 1.7	na na	16.9 29.2	-69.5 -63.0	0.2 0.2	na na		
Econ Intelligence Unit	-1.7 -0.4	-3.1 -0.3	-7.2 -2.1	-4.2 -1.8	1.3 0.8	na na	na na	na na	na na	na na		
HSBC	-1.8 -0.2	-3.0 -1.0	-7.2 -3.8	-3.2 -0.8	2.0 1.4	na na	na na	na na	0.1 0.1	5.5 na		
<b>Consensus (Mean)</b>	-1.4 0.5	-2.7 0.0	-6.6 -1.4	-3.1 -0.2	1.7 1.3	0.2 0.2	13.1 23.6	-69.3 -62.3	0.3 0.4	4.6 4.6		
<b>Last Month's Mean</b>	-1.5 0.2	-2.7 -0.1	-6.8 -1.4	-3.1 -0.1	1.7 1.4	0.2 0.3	12.1 21.0	-68.5 -60.8				
<b>3 Months Ago</b>	-1.6 0.3	-2.8 -0.3	-7.3 -1.7	-3.4 -0.3	1.7 1.4	0.3 0.5	11.2 19.9	-65.7 -57.5				
<b>High</b>	-1.2 1.0	-2.5 0.5	-5.9 1.4	-1.5 2.1	2.0 1.8	0.7 0.8	18.6 32.3	-62.4 -44.9	0.6 0.8	5.5 5.6		
<b>Low</b>	-1.8 -0.4	-3.1 -1.0	-7.2 -3.8	-5.5 -2.7	1.3 0.8	-0.4 -0.2	10.0 15.7	-74.3 -71.2	0.1 0.1	4.3 3.9		
<b>Standard Deviation</b>	0.2 0.5	0.2 0.4	0.4 1.3	1.2 1.8	0.2 0.3	0.4 0.4	3.3 5.7	3.4 6.8	0.1 0.2	0.4 0.5		
<b>Comparison Forecasts</b>												
Eur Commission (May '13)	-1.5 0.9	-3.1 -0.1	-7.6 -1.1		1.5 0.8		16.9 31.0					
IMF (July '13)	-1.6 0.0											
OECD (May '13)	-1.7 0.4	-3.0 -1.5	-9.9 -2.9		1.5 0.4							

- ◆ GDP fell by just 0.1% (q-o-q) in Q2, up from -0.4% in Q1. The pace of decline in household consumption also eased to -0.1% (q-o-q), but gross fixed investment plunged by 2.1%. Domestic weakness was partly counteracted by a surge in exports as the Euro area exited recession.

- ◆ Industrial production rebounded by 0.4% (y-o-y) in July following a 4.8% fall in June. Moreover, the PMI for manufacturing climbed to 51.1 in August, above the growth threshold of 50 for the first time since April 2011. Elsewhere, lower fuel prices saw the CPI moderate to 1.5% (y-o-y) in August, from 1.8% in July.



### Historical Data

* % change on previous year	2009	2010	2011	2012
<b>Gross Domestic Product*</b>	-3.8	-0.2	0.1	-1.6
<b>Household Consumption*</b>	-3.8	0.1	-1.2	-2.8
<b>Gross Fixed Investment*</b>	-18.0	-5.5	-5.4	-7.0
<b>Industrial Production*</b>	-16.2	0.9	-1.8	-5.9
<b>Consumer Prices*</b>	-0.3	1.8	3.2	2.4
<b>Salary Cost per Hour*</b>	5.3	1.1	2.1	0.0
<b>Current Account, Euro bn</b>	-50.5	-47.0	-39.8	-11.5
<b>General Govt. Budget Balance (Maastricht definition), Euro bn</b>	-117	-101	-100	-112
<b>3 mth Euro, % (end yr)</b>	0.7	1.0	1.4	0.2
<b>10 Yr Spanish Govt Bond Yield, % (end yr)</b>	4.0	5.5	5.1	5.3

**Nominal GDP** - Euro1,050bn (2012). **Popn** - 46.8mn (mid-year, 2012). **\$/Euro Exch. Rate** - 1.286 (average, 2012).

### Quarterly Consensus Forecasts

*Historical Data and Forecasts (bold italics) From Survey of September 9, 2013*

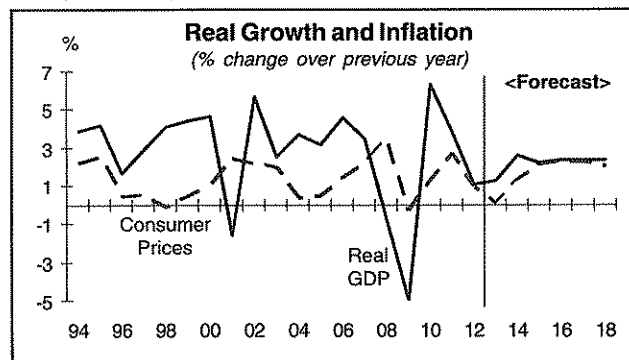
	2013				2014				2015			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>Gross Domestic Product</b>	-2.0	-1.6	-1.3	-0.4	0.1	0.5	0.8	1.0	1.3	1.4		
<b>Consumer Prices</b>	2.6	1.7	1.3	1.0	1.1	1.4	1.4	1.4	1.5	1.6		

*Percentage Change (year-on-year).*

	Average % Change on Previous Calendar Year										Annual Total				Rates on Survey Date					
	Gross Domestic Product		Household Consumption		Gross Fixed Investment		Mining & Manufacturing Production		Consumer Prices		Hourly Earnings (Mining & Manuf.)		Current Account (Skr bn)		General Govt Budget Balance (Skr bn)		1.2%		2.7%	
																	3 month Interbank Rate (%)		10 Year Govt Bond Yield (%)	
Economic Forecasters	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	End Dec'13	End Sep'14	End Dec'13	End Sep'14
NYKredit	1.6 2.7	2.6 2.6	-3.0 4.1	-1.9 5.4	0.1 1.7	na na	na na	na na	na na	na na	na na	na na	na na	1.2 1.4	2.5 2.7					
Swedbank	1.6 3.2	2.5 3.4	-3.4 4.7	-2.5 4.0	0.2 1.8	2.8 2.9	239 244	-43.5 -41.9	1.3 1.7	2.8 3.1										
Erik Penser Bank	1.5 3.3	2.4 3.4	-2.5 6.0	na na	0.1 1.1	2.8 2.7	225 220	-53.0 -45.0	1.3 1.4	2.8 2.9										
Svenska Handelsbanken	1.5 3.0	2.3 2.9	-2.6 5.1	-1.4 4.0	0.1 1.2	2.7 2.9	198 182	-51.0 -38.0	1.2 1.5	2.5 2.6										
Goldman Sachs	1.4 2.8	2.2 3.2	-1.9 6.0	-0.7 5.2	0.0 1.3	na na	na na	na na	na na	na na										
HSBC	1.3 2.6	2.8 2.0	-4.4 3.7	na na	-0.1 1.8	na na	na na	na na	1.3 na	2.1 na										
Econ Intelligence Unit	1.3 2.4	1.9 2.4	-3.5 1.7	-2.7 2.3	0.0 1.4	na na	na na	na na	na na	na na										
SE Banken	1.2 2.7	2.0 2.7	-3.0 3.0	na na	0.0 1.0	2.7 2.8	na na	na na	1.0 1.0	2.5 2.7										
National Institute - NIER	1.1 2.5	2.4 3.2	-2.6 4.9	-1.2 3.3	0.1 0.8	2.4 2.6	218 217	-48.9 -57.7	na na	2.4 2.8										
SBAB Bank	1.1 2.6	1.8 2.1	-1.8 3.6	-0.5 4.0	0.2 1.5	2.5 3.0	210 210	-50.0 -70.0	1.3 1.6	2.6 3.3										
Morgan Stanley	1.1 2.2	1.9 2.3	-2.8 4.1	na na	0.1 1.1	na na	230 244	-77.2 -57.1	na na	na na										
Citigroup	1.0 2.2	1.7 1.9	-2.7 3.0	na na	0.1 1.0	na na	242 244	na na	na na	2.1 2.3										
Confed of Swed Enterprise	0.9 2.1	2.0 1.6	-2.0 3.1	-1.4 3.3	0.3 1.9	na na	250 247	na na	1.2 1.7	2.3 2.9										
UBS	0.9 1.7	1.8 1.3	-3.3 4.0	na na	0.1 1.2	na na	284 316	na na	1.2 1.2	2.2 2.4										
Consensus (Mean)	1.2 2.6	2.2 2.5	-2.8 4.1	-1.5 3.9	0.1 1.3	2.7 2.8	233 236	-53.9 -51.6	1.2 1.4	2.4 2.8										
Last Month's Mean	1.3 2.5	2.2 2.6	-1.4 4.0	-0.9 3.9	0.2 1.4	2.6 2.8	254 256	-44.9 -43.5												
3 Months Ago	1.4 2.5	2.0 2.4	0.1 3.9	-0.2 4.6	0.3 1.5	2.6 2.8	249 248	-40.1 -40.9												
High	1.6 3.3	2.8 3.4	-1.8 6.0	-0.5 5.4	0.3 1.9	2.8 3.0	284 316	-43.5 -38.0	1.3 1.7	2.8 3.3										
Low	0.9 1.7	1.7 1.3	-4.4 1.7	-2.7 2.3	-0.1 0.8	2.4 2.6	198 182	-77.2 -70.0	1.0 1.0	2.1 2.3										
Standard Deviation	0.2 0.4	0.3 0.7	0.7 1.2	0.8 1.0	0.1 0.3	0.2 0.1	25 37	11.8 12.1	0.1 0.2	0.2 0.3										
Comparison Forecasts																				
Riksbank (Jul. '13)	1.5 2.8	2.5 3.2	-3.6 5.1		0.1 1.3															
Eur Commission (May '13)	1.5 2.5	1.8 2.6	1.4 3.9		0.9 1.4		257 277													
IMF (Apr. '13)	1.0 2.2				0.3 2.3															
OECD (May '13)	1.3 2.5	1.9 3.0	0.8 3.1		0.2 1.3															

◆ After the economy shrank by 0.1% (q-o-q) in Q2, latest indicators suggest that the Swedish recovery will likely be gradual. Industrial production slid 5.2% (y-o-y) in July following a 5.4% decline in June. The outlook for the manufacturing sector did, however, brighten somewhat as the PMI climbed to 52.2 in August from 51.3 in July.

◆ A weak labour market hit consumer spending in Q2, and retail sales unexpectedly contracted by 0.7% (m-o-m) in July. However, the seasonally-adjusted unemployment rate fell from 7.9% to 7.8% over the same period, offering hope of an uplift to domestic demand.



Historical Data				
* % change on previous year	2009	2010	2011	2012
Gross Domestic Product*	-5.0	6.3	3.8	1.1
Household Consumption*	-0.2	3.9	2.1	1.6
Gross Fixed Investment*	-15.5	6.7	6.5	3.8
Min. & Manufacturing Prodn*	-19.6	8.7	6.9	-3.2
Consumer Prices*	-0.3	1.3	2.6	0.9
Average Hourly Earnings (Mining & Manufacturing)*	2.0	3.2	2.8	3.7
Current Account, Skr bn	195	212	222	212
General Govt. Bud Bal, Skr bn	-30.4	-0.3	1.1	-22.3
3 mth Interbank Rate, % (end yr)	0.5	2.0	2.6	1.3
10 Yr Govt Bond Yield, % (end yr)	3.4	3.3	1.6	1.5

Nominal GDP - Skr 3,562bn (2012). Population - 9.5mn (mid-year, 2012). Skr/\$ Exchange Rate - 6.775 (average, 2012).

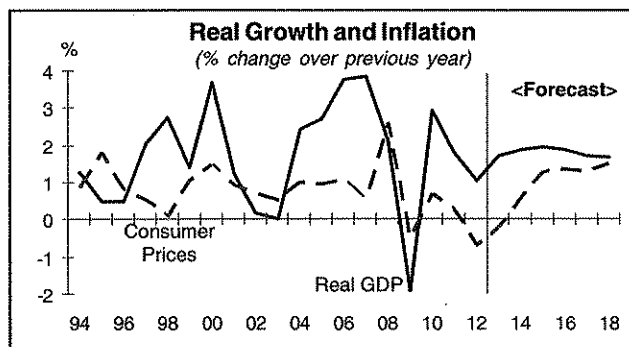
Quarterly Consensus Forecasts									
Historical Data and Forecasts (bold italics) From Survey of September 9, 2013									
	2013				2014				2015
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1 Q2
Gross Domestic Product	1.6	0.6	0.9	1.7	1.9	2.8	2.8	2.9	2.9 2.6
Consumer Prices	-0.1	-0.3	0.1	0.6	1.1	1.5	1.4	1.6	1.8 2.0
Percentage Change (year-on-year)									



	Average % Change on Previous Calendar Year										Annual Total				Rates on Survey Date					
	Gross Domestic Product		Private Consumption		Gross Fixed Investment		Industrial Production		Consumer Prices		Merchandise Exports (SwFr bn)		Current Account (SwFr bn)		General Govt Budget Balance (SwFr bn)		0.0%		1.1%	
																	3 month Euro-Franc Rate (%)	10 Year Govt Bond Yield (%)		
Economic Forecasters	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	2013 2014	End Dec'13	End Sep'14	End Dec'13	End Sep'14
Bank Vontobel	1.9 1.9	2.5 2.0	1.0 2.4	na na	-0.1 0.9	na na	87.4 92.0	4.2 4.0	0.1 0.1	1.0 1.0										
IHS Global Insight	1.9 1.9	2.5 1.8	1.3 4.1	1.9 5.2	-0.2 0.5	205 213	74.9 73.1	1.3 2.3	-0.1 0.0	1.2 1.2										
BAK Basel	1.9 2.2	2.5 1.9	0.9 2.6	0.7 2.9	-0.2 0.5	201 215	75.3 84.1	1.2 3.1	0.0 0.0	1.4 1.5										
Credit Suisse	1.8 2.0	2.3 1.8	1.4 3.2	na na	-0.1 0.6	na na	na na	na na	0.1 0.1	1.0 1.3										
Goldman Sachs	1.8 1.4	2.3 1.5	0.8 1.6	na na	-0.3 0.9	na na	82.6 81.0	4.8 5.6	na na	na na										
Pictet & Cie	1.8 2.0	2.5 2.2	1.0 2.0	na na	-0.1 0.5	na na	70.0 72.0	3.0 4.0	0.0 0.1	1.3 1.8										
Swiss Life	1.8 1.4	2.4 1.3	1.3 2.9	na na	-0.1 0.7	na na	na na	na na	na na	na na										
UBS	1.8 2.0	2.4 1.8	0.9 3.2	na na	-0.2 0.7	na na	na na	na na	0.0 0.0	1.0 1.5										
Zürcher Kantonalbank	1.7 1.8	2.6 1.9	0.6 3.0	3.3 5.5	-0.3 0.7	206 218	72.5 79.6	2.6 3.5	0.0 0.1	1.2 1.6										
Institut Crea	1.6 2.5	2.4 1.8	-0.5 2.6	na na	-0.3 0.3	195 203	75.8 88.8	2.5 3.9	0.1 1.0	na na										
HSBC	1.5 1.8	2.4 2.0	-0.1 2.2	na na	-0.3 0.4	na na	na na	na na	0.0 0.0	na na										
Econ Intelligence Unit	1.5 1.7	2.3 2.1	0.0 1.7	0.7 3.1	-0.4 0.3	na na	na na	na na	na na	na na										
KOF Swiss Econ Inst	1.4 2.0	2.3 1.9	0.7 3.7	na na	-0.2 0.5	203 209	89.5 95.5	0.8 1.7	0.0 0.1	1.0 1.5										
Consensus (Mean)	1.7 1.9	2.4 1.9	0.7 2.7	1.6 4.2	-0.2 0.6	202 212	78.5 83.3	2.6 3.5	0.0 0.1	1.1 1.4										
Last Month's Mean	1.4 1.6	2.2 1.7	0.4 2.4	2.1 3.0	-0.2 0.6	203 213	80.2 83.2	2.6 3.4												
3 Months Ago	1.4 1.6	2.0 1.6	0.8 2.4	1.7 3.4	-0.2 0.6	205 214	81.0 81.3	2.6 3.3												
High	1.9 2.5	2.6 2.2	1.4 4.1	3.3 5.5	-0.1 0.9	206 218	89.5 95.5	4.8 5.6	0.1 1.0	1.4 1.8										
Low	1.4 1.4	2.3 1.3	-0.5 1.6	0.7 2.9	-0.4 0.3	195 203	70.0 72.0	0.8 1.7	-0.1 0.0	1.0 1.0										
Standard Deviation	0.2 0.3	0.1 0.2	0.6 0.7	1.2 1.4	0.1 0.2	4 6	7.1 8.5	1.4 1.2	0.1 0.3	0.2 0.2										
Comparison Forecasts																				
IMF (Apr. '13)	1.3 1.8																			
OECD (May '13)	1.4 2.0	2.1 2.2	1.2 2.4																	
SECO (June '13)	1.4 2.1	2.0 1.7																		

- Swiss GDP grew by a better-than-expected 0.5% (q-o-q) and 2.1% (y-o-y) in Q2. Private consumption, buoyed by low unemployment, advanced by 0.7% (q-o-q) while gross fixed investment rebounded by 1.4%, its fastest pace of expansion in more than two years. Furthermore, Euro zone data has brightened, suggesting a possible recovery in Swiss exports over the coming months.

- The improving economy means the SNB is likely to maintain its currency cap of 1.20SwFr/euro at its next meeting on September 19. Inflation was unchanged at 0.0% (y-o-y) in August.



Historical Data				
* % change on previous year	2009	2010	2011	2012
<b>Gross Domestic Product*</b>	-1.9	3.0	1.8	1.0
<b>Private Consumption*</b>	1.8	1.7	1.1	2.4
<b>Gross Fixed Investment*</b>	-8.0	4.8	4.5	-0.4
<b>Industrial Production*</b>	-8.0	6.4	0.8	1.8
<b>Consumer Prices*</b>	-0.5	0.7	0.2	-0.7
<b>Merch Exports, SwFr bn</b>	181	193	198	201
<b>Current Account, SwFr bn</b>	58.4	82.0	49.2	80.4
<b>General Govt. Bud. Bal. SwFr bn</b>	10.5	2.5	2.6	3.6
<b>3 mth Euro-Franc Rate, % (end yr)</b>		0.3	0.5	0.2
<b>10 Yr Govt Bond Yield, % (end yr)</b>		2.0	1.7	0.7
e = consensus estimate based on latest survey				
Nominal GDP - SwFr 593bn (2012). Population - 8.0mn (mid-year, 2012). SwFr/\$ Exchange Rate - 0.938 (average, 2012).				

Quarterly Consensus Forecasts									
Historical Data and Forecasts (bold italics) From Survey of September 9, 2013									
	2013				2014				2015
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
<b>Gross Domestic Product</b>	1.5	2.1	1.7	1.8	1.7	1.9	2.0	2.2	2.2
<b>Consumer Prices</b>	-0.4	-0.4	-0.1	0.2	0.4	0.6	0.6	0.7	0.8
Percentage Change (year-on-year)									

Forecasts for the countries in Western Europe, the Middle East and Africa shown on the next two pages were provided by the following leading economic forecasters, among others:

<i>Bank Leumi</i>	<i>Bank of America Merrill</i>	<i>Citigroup</i>
<i>Dun &amp; Bradstreet</i>	<i>Economist Intelligence Unit</i>	<i>Euromonitor</i>
<i>Experian</i>	<i>Fitch Ratings</i>	<i>Forecaster ECOSA</i>
<i>Moody's Analytics</i>	<i>Nomura</i>	<i>NYKredit</i>
	<i>Oxford Economics</i>	

e = consensus estimate based on latest survey

<b>AUSTRIA</b>	Population - 8.5mn (2012, mid-year)	Historical Data				Consensus Forecasts	
	Nominal GDP - US\$399.7bn (2012)	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Gross Domestic Product (% change on previous year)		-3.8	1.8	2.8	0.9	0.4	1.5
Industrial Production (% change on previous year)		-12.5	3.5	6.0	3.2	0.3	2.6
Consumer Prices (% change on previous year)		0.5	1.8	3.3	2.4	2.1	1.9
Current Account (US Dollar bn)		10.4	12.9	5.7	7.0	10.3	10.0

<b>BELGIUM</b>	Population - 11.1mn (2012, mid-year)	Historical Data				Consensus Forecasts	
	Nominal GDP - US\$484.8bn (2012)	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Gross Domestic Product (% change on previous year)		-2.8	2.4	1.9	-0.3	-0.1	0.8
Industrial Production (% change on previous year)		-10.2	11.2	4.2	-3.1	-1.0	1.5
Consumer Prices (% change on previous year)		-0.1	2.2	3.5	2.8	1.3	1.7
Current Account (US Dollar bn)		-6.7	9.0	-5.9	-7.8	-5.2	-2.8

<b>DENMARK</b>	Population - 5.6mn (2012, mid-year)	Historical Data				Consensus Forecasts	
	Nominal GDP - US\$314.2bn (2012)	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Gross Domestic Product (% change on previous year)		-5.7	1.6	1.1	-0.4	0.3	1.4
Manufacturing Production (% change on previous year)		-17.2	2.4	4.7	0.8	1.7	1.4
Consumer Prices (% change on previous year)		1.3	2.3	2.7	2.4	1.1	1.8
Current Account (US Dollar bn)		10.6	18.4	18.8	17.7	12.7	14.2

<b>EGYPT</b>	Population - 80.7mn (2012, mid-year)	Historical Data				Consensus Forecasts	
	Nominal GDP - US\$249.7bn (2012) <sup>1</sup>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Gross Domestic Product (% change on previous year) <sup>1</sup>		4.7	5.1	1.8	2.2	2.7	2.4
Consumer Prices (% change on previous year)		11.9	11.1	10.1	7.1	9.0	9.7
Current Account (US Dollar bn)		-4.4	-4.3	-6.1	-7.9	-5.9	-6.5

<sup>1</sup> year(s) ending June 30

<b>FINLAND</b>	Population - 5.4mn (2012, mid-year)	Historical Data				Consensus Forecasts	
	Nominal GDP - US\$250.1bn (2012)	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Gross Domestic Product (% change on previous year)		-8.5	3.4	2.7	-0.8	-0.5	1.3
Industrial Production (% change on previous year)		-18.1	4.8	2.3	-1.6	-4.2	1.9
Consumer Prices (% change on previous year)		0.0	1.2	3.4	3.4	2.1	2.1
Current Account (US Dollar bn)		4.2	3.5	-4.0	-4.6	-2.4	-2.2

<b>GREECE</b>	Population - 11.1mn (2012, mid-year)	Historical Data				Consensus Forecasts	
	Nominal GDP - US\$249.1bn (2012)	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Gross Domestic Product (% change on previous year)		-3.1	-4.9	-7.1	-6.4	-4.5	-1.0
Industrial Production (% change on previous year)		-9.4	-5.9	-7.8	-3.3	-2.1	0.2
Consumer Prices (% change on previous year)		1.2	4.7	3.3	1.5	-0.5	-0.4
Current Account (US Dollar bn)		-35.9	-29.8	-28.7	-8.4	-4.0	-2.2

**ADDITIONAL COUNTRIES**
**SEPTEMBER 2013**

<b>IRELAND</b>	Population - 4.6mn (2012, mid-year)	<b>Historical Data</b>				<b>Consensus Forecasts</b>	
	Nominal GDP - US\$210.4bn (2012)	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Gross Domestic Product (% change on previous year)		-6.4	-1.1	2.2	0.2	0.3	1.8
Industrial Production (% change on previous year)		-4.5	7.5	0.1	-1.4	-0.4	2.3
Consumer Prices (% change on previous year)		-4.5	-1.0	2.6	1.7	1.0	1.3
Current Account (US Dollar bn)		-5.2	2.4	2.8	9.3	8.7	9.7

<b>ISRAEL</b>	Population - 7.6mn (2012, mid-year)	<b>Historical Data</b>				<b>Consensus Forecasts</b>	
	Nominal GDP - US\$242.5bn (2012)	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Gross Domestic Product (% change on previous year)		1.1	5.0	4.6	3.4	3.4	3.5
Industrial Production (% change on previous year)		-7.6	11.3	1.9	4.0	2.8	4.0
Consumer Prices (% change on previous year)		3.3	2.7	3.5	1.7	1.8	2.3
Current Account (US Dollar bn)		7.9	7.2	3.3	0.8	4.5	5.2

<b>NIGERIA</b>	Popn - 168.8mn (2012, mid-year)	<b>Historical Data</b>				<b>Consensus Forecasts</b>	
	Nominal GDP - US\$262.6bn (2012)	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Gross Domestic Product (% change on previous year)		7.0	8.0	7.4	6.5	6.8	6.7
Consumer Prices (% change on previous year)		12.5	13.7	10.8	12.2	10.1	10.5
Current Account (US Dollar bn)		14.0	13.4	8.8	14.8 e	12.4	9.3

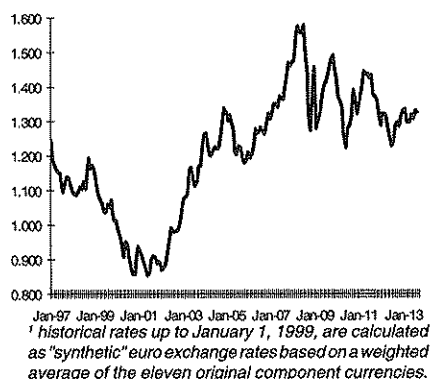
<b>PORTUGAL</b>	Population - 10.6mn (2012, mid-year)	<b>Historical Data</b>				<b>Consensus Forecasts</b>	
	Nominal GDP - US\$212.7bn (2012)	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Gross Domestic Product (% change on previous year)		-2.9	1.9	-1.6	-3.2	-2.3	0.1
Industrial Production (% change on previous year)		-8.4	1.7	-2.2	-5.0	0.5	0.6
Consumer Prices (% change on previous year)		-0.8	1.4	3.7	2.8	0.6	0.8
Current Account (US Dollar bn)		-25.6	-24.2	-16.7	-3.3	-0.2	1.0

<b>SAUDI ARABIA</b>	Popn - 28.3mn (2012, mid-year)	<b>Historical Data</b>				<b>Consensus Forecasts</b>	
	Nominal GDP - US\$727.2bn (2012)	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Gross Domestic Product (% change on previous year)		1.8	4.8	8.5	6.8	4.1	4.6
Consumer Prices (% change on previous year)		5.0	5.4	5.8	2.9	4.1	4.1
Current Account (US Dollar bn)		21.0	66.8	159	165	118	97.8

<b>SOUTH AFRICA</b>	Popn - 52.4mn (2012, mid-year)	<b>Historical Data</b>				<b>Consensus Forecasts</b>	
	Nominal GDP - US\$384.3bn (2012)	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
Gross Domestic Product (% change on previous year)		-1.5	3.1	3.5	2.5	2.2	3.1
Manufacturing Production (% change on previous year)		-13.8	4.6	2.7	2.4	2.3	3.5
Consumer Prices (% change on previous year)		7.1	4.3	5.0	5.6	5.9	5.8
Current Account (US Dollar bn)		-11.5	-10.2	-13.6	-24.1	-21.3	-19.2

e = consensus estimate based on latest survey

Foreign Exchange Rates											
¹All US\$ rates are amounts of currency per dollar, except the UK pound and the euro which are reciprocals. A positive (+) sign for the % change implies an appreciation of the currency against the US Dollar and vice versa.	Historical Data				Latest Spot Rate (Sep. 9)	Consensus Forecasts					
	Rates at end of:					Forecast End Dec. 2013	Percent Change	Forecast End Sep. 2014	Percent Change	Forecast End Sep. 2015	Percent Change
	2009	2010	2011	2012							
<b><u>Rates per US Dollar¹</u></b>											
Canadian Dollar	1.047	1.001	1.021	0.996	1.037	1.045	-0.8	1.053	-1.5	1.055	-1.7
Egyptian Pound	5.475	5.793	6.017	6.189	6.905	7.095	-2.7	7.300	-5.4	7.485	-7.7
European Euro	1.441	1.336	1.294	1.318	1.325	1.286	-3.0	1.265	-4.5	1.265	-4.6
Israeli Shekel	3.775	3.549	3.821	3.731	3.619	3.640	-0.6	3.686	-1.8	3.821	-5.3
Japanese Yen	92.06	81.45	77.72	86.47	99.58	102.2	-2.6	105.5	-5.6	107.1	-7.0
Nigerian Naira	149.6	150.7	158.3	156.0	163.7	160.9	+1.7	164.7	-0.6	169.0	-3.1
Saudi Arabian Riyal	3.750	3.750	3.750	3.750	3.751	3.750	0.0	3.750	0.0	3.750	0.0
South African Rand	7.380	6.632	8.143	8.484	9.980	9.958	+0.2	9.852	+1.3	9.476	+5.3
United Kingdom Pound	1.620	1.566	1.546	1.626	1.572	1.507	-4.1	1.497	-4.8	1.516	-3.6
<b><u>Rates per Euro</u></b>											
Danish Krone	7.479	7.499	7.435	7.461	7.459	7.464	-0.1	7.460	0.0	7.458	0.0
Norwegian Krone	8.329	7.829	7.750	7.337	7.980	7.652	+4.3	7.523	+6.1	7.584	+5.2
Swedish Krona	10.25	8.964	8.913	8.577	8.709	8.551	+1.8	8.431	+3.3	8.479	+2.7
Swiss Franc	1.485	1.255	1.218	1.207	1.235	1.250	-1.2	1.269	-2.7	1.263	-2.2

**Yen per US\$**
**US\$ per Euro<sup>1</sup>**
**US\$ per UK Pound**


Brent, US\$ per barrel		
Range 1990-2013	9.10 - 143.95	
Spot Rate (Sep. 9)	113.72	
Brent September Survey	Forecast for End Dec. 2013	End Sep. 2014
Mean Forecast	109.0	106.8
High	120.0	118.0
Low	100.0	93.0
Standard Deviation	4.2	6.3
No. of Forecasts	66	66

**Geopolitical Price Pressures**

The oil markets have been jolted by the increasingly violent civil war in Syria which could prompt military action by the US. Investors have been selling shares and buying into oil, gold and US government bonds. Consequently, the price of Brent has leapt from a recent low of US\$107.70 per barrel on July 31 to US\$116.12 on September 6. Crude futures on September 9 (our survey deadline) saw a modest fallback to US\$113.72 as the markets adopted a wait-and-see approach in advance of the US Congress's vote on airstrikes. Brent was also pulled down by Chinese data showing a 17.9% (m-o-m) fall in August crude oil imports, due to summer maintenance at some refineries. By contrast, ongoing oil theft and pipeline outages in Nigeria are hitting production and pushing up prices.

**QUARTERLY FORECASTS**
**SEPTEMBER 2013**

continued from page 3

<b>France</b>												
* % change over previous year	<b>2012</b>		<b>2013</b>				<b>2014</b>				<b>2015</b>	
	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2
<b>Gross Domestic Product*</b>	0.0	-0.3	-0.5	0.3	0.1	0.5	0.7	0.6	0.8	0.9	1.1	1.1
% change, qtr/qtr	0.2	-0.2	-0.2	0.5	0.0	0.1	0.1	0.3	0.2	0.3	0.3	0.3
<b>Household Consumption*</b>	-0.5	-0.1	-0.4	0.5	0.4	0.4	0.5	0.3	0.5	0.7	0.9	0.9
% change, qtr/qtr	0.1	0.1	-0.1	0.4	0.0	0.1	0.0	0.2	0.2	0.2	0.3	0.3
<b>Manufacturing Production*</b>	-1.8	-4.3	-3.3	-0.2	-1.5	0.7	1.4	0.4	0.9	1.2	1.7	1.9
<b>Consumer Prices*</b>	2.0	1.5	1.1	0.8	1.0	1.1	1.4	1.6	1.5	1.6	1.5	1.6
<b>3 month Euro Rate, % <sup>1</sup></b>	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4

<sup>1</sup> End period

<b>United Kingdom</b>												
* % change over previous year	<b>2012</b>		<b>2013</b>				<b>2014</b>				<b>2015</b>	
	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2
<b>Gross Domestic Product*</b>	0.1	0.0	0.3	1.5	1.4	2.1	2.4	2.2	2.0	2.1	2.0	2.1
% change, qtr/qtr	0.7	-0.2	0.3	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.6
<b>Household Consumption*</b>	1.5	1.5	1.5	1.6	1.8	1.6	1.7	1.8	1.7	1.9	2.0	2.0
% change, qtr/qtr	0.3	0.5	0.3	0.4	0.6	0.4	0.4	0.4	0.5	0.5	0.5	0.5
<b>Manufacturing Production*</b>	-1.3	-2.6	-2.6	-0.6	-0.4	1.9	2.5	2.2	1.7	1.7	1.9	1.9
<b>Retail Prices (underlying rate)*</b>	2.9	3.0	3.3	3.1	3.2	3.0	2.9	3.2	3.1	3.1	3.0	3.1
<b>Consumer Prices*</b>	2.4	2.6	2.8	2.7	2.7	2.5	2.3	2.5	2.5	2.4	2.5	2.5
<b>3 month Interbank Rate, % <sup>1</sup></b>	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.9	1.0

<sup>1</sup> End period

<b>Italy</b>												
* % change over previous year	<b>2012</b>		<b>2013</b>				<b>2014</b>				<b>2015</b>	
	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2
<b>Gross Domestic Product*</b>	-2.6	-2.8	-2.4	-2.1	-1.8	-0.7	0.0	0.4	0.6	0.7	1.2	1.3
% change, qtr/qtr	-0.3	-0.9	-0.6	-0.3	0.1	0.1	0.1	0.1	0.3	0.2	0.5	0.2
<b>Household Consumption*</b>	-4.8	-4.8	-3.4	-3.3	-1.9	-1.1	-0.5	-0.1	0.3	0.5	0.8	0.9
% change, qtr/qtr	-1.4	-1.0	-0.5	-0.4	0.0	-0.1	0.1	0.0	0.4	0.1	0.3	0.1
<b>Industrial Production*</b>	-5.1	-7.0	-4.3	-3.7	-2.6	-0.6	0.2	1.5	2.0	2.6	2.8	2.7
<b>Consumer Prices*</b>	3.2	2.4	1.9	1.1	1.2	1.5	1.6	1.9	1.8	1.5	2.0	2.1
<b>3 month Euro Rate, % <sup>1</sup></b>	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.5	0.9

<sup>1</sup> End period

<b>Canada</b>												
* % change over previous year	<b>2012</b>		<b>2013</b>				<b>2014</b>				<b>2015</b>	
	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2
<b>Gross Domestic Product*</b>	1.2	1.0	1.4	1.4	1.8	2.1	2.2	2.3	2.4	2.5	2.6	2.6
% change, qtr/qtr	0.2	0.2	0.5	0.4	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.6
<b>Personal Expenditure*</b>	1.8	2.1	1.8	2.5	2.3	2.3	2.5	2.1	2.2	2.3	2.5	2.5
% change, qtr/qtr	0.6	0.5	0.3	0.9	0.5	0.5	0.5	0.6	0.5	0.6	0.7	0.6
<b>Industrial Production*</b>	-0.1	-0.6	0.6	-0.2	0.7	1.1	0.9	2.0	2.3	2.6	2.5	2.6
<b>Consumer Prices*</b>	1.2	0.9	0.8	0.7	1.3	1.6	1.6	1.8	1.9	2.0	1.9	2.0
<b>3 month Treasury Bill Rate, % <sup>1</sup></b>	1.0	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.2	1.5	1.8

<sup>1</sup> End period

<b>Euro zone</b>												
* % change over previous year	<b>2012</b>		<b>2013</b>				<b>2014</b>				<b>2015</b>	
	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2
<b>Gross Domestic Product*</b>	-0.7	-1.0	-1.0	-0.5	-0.3	0.4	0.8	0.8	1.0	1.1	1.3	1.3
% change, qtr/qtr	-0.1	-0.5	-0.2	0.3	0.1	0.2	0.3	0.3	0.2	0.3	0.5	0.3
<b>Private Consumption*</b>	-1.7	-1.5	-1.3	-0.6	-0.5	0.2	0.4	0.4	0.5	0.6	0.9	1.0
% change, qtr/qtr	-0.1	-0.5	-0.2	0.2	0.0	0.2	0.0	0.2	0.1	0.3	0.4	0.3
<b>Industrial Production*</b>	-2.5	-3.0	-2.3	-0.5	-0.2	1.9	2.4	2.0	2.3	1.9	2.8	-0.4
<b>Consumer Prices*</b>	2.5	2.3	1.9	1.4	1.4	1.4	1.3	1.6	1.5	1.4	1.6	1.6

<sup>1</sup> End period

### Netherlands

* % change over previous year	2012		2013				2014				2015	
	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2
Gross Domestic Product*	-1.4	-1.3	-1.4	-2.0	-1.1	-0.4	0.0	0.2	0.5	0.7	1.1	1.3
% change, qtr/qtr	-0.9	-0.6	-0.4	-0.2	0.0	0.1	0.0	0.1	0.3	0.3	0.4	0.3
Private Consumption*	-1.3	-2.2	-1.8	-2.4	-2.3	-1.5	-1.5	-0.8	-0.4	-0.1	0.3	0.5
% change, qtr/qtr	-0.4	-1.1	-0.1	-0.8	-0.3	-0.2	-0.2	-0.1	0.1	0.1	0.2	0.1
Manufacturing Production*	-0.7	-1.1	-2.3	-1.2	-1.1	0.0	2.0	2.2	2.0	1.6	1.8	2.0
Consumer Prices*	2.3	2.8	3.0	2.8	2.8	2.0	1.8	1.9	1.5	1.8	1.6	1.6
3 month Euro Rate, % <sup>1</sup>	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.5	0.8	1.0

<sup>1</sup> End period

### Norway

* % change over previous year	2012		2013				2014				2015	
	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2
Gross Dom. Prod. (Mainland)*	3.2	2.7	2.2	1.7	2.0	2.5	2.5	2.7	2.6	2.6	2.6	2.6
% change, qtr/qtr	0.8	0.1	0.6	0.2	1.1	0.6	0.6	0.4	1.0	0.6	0.5	0.5
Private Consumption*	3.4	2.8	3.2	2.2	2.5	2.9	2.8	3.1	3.2	3.7	3.4	3.4
% change, qtr/qtr	0.6	0.4	1.1	0.2	0.8	0.8	0.9	0.5	1.0	1.2	0.6	0.5
Manufacturing Production*	5.0	2.8	3.4	5.0	3.8	4.6	4.1	1.9	1.6	1.8	1.7	1.8
Consumer Prices*	0.4	1.2	1.2	2.0	2.7	2.2	2.1	1.9	1.8	1.8	1.8	1.9
3 month Interbank Rate, % <sup>1</sup>	2.0	1.8	1.8	1.7	1.8	1.8	1.8	1.8	1.9	2.0	2.2	2.3

<sup>1</sup> End period

### Spain

* % change over previous year	2012		2013				2014				2015	
	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2
Gross Domestic Product*	-1.7	-2.1	-2.0	-1.6	-1.3	-0.4	0.1	0.5	0.8	1.0	1.3	1.4
% change, qtr/qtr	-0.4	-0.8	-0.4	-0.1	0.0	0.1	0.1	0.3	0.3	0.3	0.4	0.4
Household Consumption*	-2.8	-3.6	-4.3	-3.2	-2.6	-0.7	-0.3	-0.1	0.3	0.4	0.4	0.6
% change, qtr/qtr	-0.7	-2.0	-0.5	-0.1	-0.1	0.0	-0.1	0.1	0.2	0.1	-0.1	0.3
Industrial Production*	-6.2	-4.8	-7.6	0.2	-2.4	-1.3	-0.1	-0.4	1.0	1.4	2.5	1.8
Consumer Prices*	2.8	3.1	2.6	1.7	1.3	1.0	1.1	1.4	1.4	1.4	1.5	1.6
3 month Euro Rate, % <sup>1</sup>	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.6	0.8

<sup>1</sup> End period

### Sweden

* % change over previous year	2012		2013				2014				2015	
	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2
Gross Domestic Product*	0.3	1.5	1.6	0.6	0.9	1.7	1.9	2.8	2.8	2.9	2.9	2.6
% change, qtr/qtr	0.1	0.0	0.6	-0.1	0.4	0.8	0.7	0.8	0.5	0.8	0.7	0.5
Household Consumption*	1.6	2.2	2.0	1.7	2.4	2.6	2.4	2.6	2.8	2.8	2.7	2.6
% change, qtr/qtr	0.2	0.6	0.9	-0.1	1.0	0.7	0.8	0.1	1.1	0.8	0.7	0.0
Mining & Manuf. Production*	-1.4	-3.8	-3.1	-4.3	-1.0	3.2	3.9	5.6	4.3	4.0	2.9	3.0
Consumer Prices*	0.6	0.1	-0.1	-0.3	0.1	0.6	1.1	1.5	1.4	1.6	1.8	2.0
3 month Interbank Rate, % <sup>1</sup>	1.6	1.3	1.3	1.2	1.2	1.3	1.3	1.3	1.4	1.5	1.7	1.8

<sup>1</sup> End period

### Switzerland

* % change over previous year	2012		2013				2014				2015	
	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2
Gross Domestic Product*	1.4	1.4	1.5	2.1	1.7	1.8	1.7	1.9	2.0	2.2	2.0	2.2
% change, qtr/qtr	0.7	0.3	0.6	0.5	0.2	0.4	0.5	0.6	0.3	0.7	0.3	0.9
Private Consumption*	2.4	2.6	2.3	2.8	2.6	2.2	2.0	1.9	1.9	1.9	1.8	1.8
% change, qtr/qtr	0.6	0.9	0.6	0.7	0.4	0.4	0.4	0.6	0.4	0.4	0.4	0.6
Industrial Production*	2.2	1.5	2.7	-0.3	2.4	2.7	4.3	4.6	4.5	4.7	4.0	4.0
Consumer Prices*	-0.5	-0.4	-0.4	-0.4	-0.1	0.2	0.4	0.6	0.6	0.7	0.8	0.9
3 month Euro-Franc Rate, % <sup>1</sup>	-0.1	-0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.6

- ☐ GDP - Gross Domestic Product  
na - not available  
OECD - Organisation for Economic Co-operation and Development  
BoE - Bank of England  
y-o-y - year-on-year
- IMF - International Monetary Fund  
Emu - European economic and monetary union  
ECB - European Central Bank  
PMI - Purchasing Managers Index  
q-o-q - quarter-on-quarter  
m-o-m - month-on-month
- ☐ Measures of GDP, Consumption, Business Investment and Industrial Production are expressed in real (i.e. inflation-adjusted) terms. These variables, and certain others as indicated, are expressed as percentage changes over the previous year.
- ☐ All individual country forecasters on pages 4-24 are listed in descending order of their 2013 real GDP estimates. Consensus forecasts are mean arithmetic averages of the listed individual estimates.

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# CONSENSUS FORECASTS: WORLD ECONOMIC ACTIVITY

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September Survey	Real GDP % increase			Consumer Prices % increase			Current Account Balance, US\$bn		
	2012	2013	2014	2012	2013	2014	2012	2013	2014
Belgium	-0.3	-0.1	0.8	2.8	1.3	1.7	-7.8	-5.2	-2.8
Canada	1.7	1.7	2.3	1.5	1.1	1.8	-62.3	-53.4	-46.9
France	0.0	0.1	0.8	2.0	1.0	1.5	-57.1	-51.8	-45.7
Germany	0.7	0.5	1.7	2.0	1.6	1.8	239	244	236
Italy	-2.4	-1.7	0.5	3.0	1.5	1.6	-10.8	16.7	21.3
Japan	2.0	1.9	1.7	0.0	0.1	2.2	60.4	61.4	82.5
Netherlands	-1.3	-1.2	0.3	2.5	2.7	1.8	77.8	86.9	82.8
Norway	3.3	2.3	2.7	0.7	1.9	1.8	70.8	61.5	61.4
Spain	-1.6	-1.4	0.5	2.4	1.7	1.3	-14.8	17.2	30.0
Sweden	1.1	1.2	2.6	0.9	0.1	1.3	31.3	35.6	35.4
Switzerland	1.0	1.7	1.9	-0.7	-0.2	0.6	85.7	83.4	84.0
United Kingdom	0.2	1.3	2.1	2.8	2.7	2.5	-93.5	-74.2	-64.2
United States	2.8	1.6	2.7	2.1	1.5	1.9	-440	-419	-443
North America <sup>1</sup>	2.7	1.6	2.6	2.0	1.5	1.9	-502.3	-472.6	-489.9
Western Europe <sup>2</sup>	-0.3	0.0	1.3	2.2	1.5	1.7	338.0	438.9	468.9
European Union <sup>2</sup>	-0.4	-0.1	1.2	2.4	1.6	1.7	155.2	278.7	304.3
Euro zone <sup>2</sup>	-0.6	-0.4	0.9	2.5	1.5	1.5	157.4	232.5	212.6
Asia Pacific <sup>3</sup>	4.8	4.6	4.7	2.5	2.5	3.2	250.8	303.2	336.8
Eastern Europe <sup>4</sup>	2.4	2.2	3.1	6.5	5.1	4.9	-6.8	-18.2	-39.5
Latin America <sup>5</sup>	2.8	2.7	3.3	6.1	7.5	7.0	-99.2	-128.9	-132.3
Other Countries <sup>6</sup>	4.8	3.8	4.1	5.2	5.7	5.9	148.4	107.7	86.6
Total <sup>7</sup>	2.7	2.4	3.1	3.0	2.7	3.0			

Regional totals, as well as the grand total for GDP growth and inflation, are weighted averages calculated using **2012 GDP weights, converted at average 2012 exchange rates**. Current account forecasts given in national currencies on pages 7-24 have been converted using consensus exchange rate forecasts for the purposes of comparison. <sup>1</sup>USA and Canada. <sup>2</sup>The Euro zone aggregate is taken from our panel's latest forecasts (pages 18-19). The Euro zone current account data and forecasts are based on extra-euro zone data, i.e., an aggregate of the Euro zone member states' transactions only with nonresidents of the Euro zone. The European Union data includes the Euro zone countries listed on page 18 plus Denmark, Sweden and the United Kingdom, as well as May 2004 entrants the Czech Republic, Hungary, Latvia, Lithuania and Poland, plus Romania and Bulgaria which entered in January 2007, plus Croatia which entered in July 2013 (data taken from Eastern Europe Consensus Forecasts). Western Europe comprises the Euro zone plus Denmark, Sweden and the United Kingdom, along with Norway and Switzerland. <sup>3</sup>Survey results for Japan plus fifteen other countries taken from **Asia Pacific Consensus Forecasts**. <sup>4</sup>Twenty-seven countries, including eleven European Union countries taken from the latest issue of **Eastern Europe Consensus Forecasts**. <sup>5</sup>Eighteen countries taken from the latest issue of **Latin American Consensus Forecasts** (inflation figures are on a December/December basis). <sup>6</sup>Egypt, Israel, Nigeria, Saudi Arabia and South Africa. <sup>7</sup>The **Eastern Europe** and **Latin American** components of the **World Total** are taken from the prior month's surveys.

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**Energy Probe Research Foundation (EP) INTERROGATORY #42**

**Issue 6.2**      **Is the capital structure and cost of capital component of the revenue requirement for 2015 as set out in the Custom Application appropriate?**

**Interrogatory**

**Reference:**    **Exhibit A, Tab 3, Schedule 1, Page 3 and  
Exhibit B1, Tab 2, Schedule 1- Cost of Debt-Optimization and Annual  
Adjustments**

- a) Please provide details of the Updating of Costs of Debt, Debt Requirements and Debt Cost. In particular, how will debt requirements totalling \$1,972.2 billion new debt over Plan be kept current? Please provide details.
- b) Discuss the assumptions regarding the forecast for equal amounts of 5 year, 10 year and 30 year debt. Confirm this was not the case historically (see Exhibit B2 Tab 1 Schedule 2 Page 4).
- c) Please provide details for optimization of Cost of Debt and Mapping to HO Dx & Tx during the 5 year MY COS Plan.
- d) In particular discuss strategies for Debt Issue timing relative to debt market outlook (for example if Market rates rising Issue more Debt early. Market rates falling issue less debt).
- e) Provide a discussion of how to ensure Cost of Debt is optimized, Ratepayers and HO kept whole over 5 year CMY COS Plan.

**Response**

- a) As stated in Exhibit B1, Tab 2, Schedule 1, page 9, line numbers 15 to 19;

*“...Hydro One assumes that long term debt rate will be updated to reflect and take into account the actual issuances of debt since the time of original application consistent with the OEB’s Decision on Hydro One Transmission’s 2013 and 2014 rate application in EB-2012-0031 and changes in the interest rate forecast.”.*

For the 2016 to 2019 period it would be updated on an annual basis at the time the cost of capital parameters are updated to reflect the September Consensus forecast and Bank of Canada data available in October of the preceding year as part of the Draft Rate Order for those test years.

1 b) Equal amounts of 5 year, 10 year and 30 year debt is used as an assumption for  
2 planning purposes, as discussed in Exhibit B1, Tab 2, Schedule 1, page 6, lines 5 to 7.  
3 This evidence states that, "For 2014 to 2019 planning purposes it is assumed that debt  
4 issuance will be evenly distributed over the standard five, ten and 30-year terms,  
5 which are preferred by investors."

6  
7 This assumption has been employed historically for planning purposes. As shown in  
8 Exhibit B2, Tab 1, Schedule 2 Page 4, actual debt issuance has not followed this  
9 assumption as approximately 65% of the debt outstanding has a remaining term of 15  
10 years or greater.

11  
12 c) "Hydro One Inc.'s debt financing strategy takes into consideration the objectives of  
13 cost effectiveness, distributing debt maturities evenly over time, and ensuring the  
14 term of the debt portfolio is compatible with the long life of the Company's assets",  
15 as discussed in Exhibit B1, Tab 2, Schedule 1, page 1, line numbers 12 to 14.

16  
17 Mapping to Hydro One Dx and Tx are based upon borrowing requirements, which are  
18 driven mainly by debt retirement, capital expenditures net of internally generated  
19 funds, and the maintenance of its capital structure, as discussed in Exhibit B1, Tab 2,  
20 Schedule 1, page 2, lines 18 and 19.

21  
22 d) The timing of debt issuance takes into consideration the objectives discussed in the  
23 first part of the response of part c) regarding cost of debt and is also impacted by  
24 market receptivity.

25  
26 e) Please refer to the first part of the response of part c) regarding cost of debt.

27  
28 Ratepayers and Hydro One are kept whole over a 5 year COS plan through the  
29 process discussed in the response to part a) of this interrogatory.

**Energy Probe Research Foundation (EP) INTERROGATORY #43**

**Issue 6.2**      **Is the capital structure and cost of capital component of the revenue requirement for 2015 as set out in the Custom Application appropriate?**

**Interrogatory**

**Reference:**    **Exhibit B1/Tab 1/Schedule 1/p.3**

Preamble

As discussed in this Exhibit, forecast interest rates will be updated consistent with the methodology used for the return on common equity and deemed short term interest rate.

- a) Confirm that in the 5-year Plan period, the long term debt rate will be updated to reflect and take into account the actual issuances of debt since the time of original application and changes in the interest rate forecast, consistent with the OEB Decision on Hydro One Transmission 2013 and 2014 rate application in EB-2012-0031.
- b) Please provide details on timing and how this annual adjustment will be done.

**Response**

- a) Yes, in the 5-year Plan period, the long term debt rate will be updated to reflect and take into account the actual issuances of debt since the time of original application and changes in the interest rate forecast, consistent with the OEB Decision on Hydro One Transmission 2013 and 2014 rate application in EB-2012-0031.
- b) Please see response to Exhibit I, Tab 6.2, Schedule 11-EP 42, part a).

**Energy Probe Research Foundation (EP) INTERROGATORY #44**

**Issue 6.2      Is the capital structure and cost of capital component of the revenue requirement for 2015 as set out in the Custom Application appropriate?**

**Interrogatory**

**Reference:      Exhibit B1, Tab 2, Schedule 1, Page 2 and Page 7**

Preamble:

Energy Probe suggests a significant complication during a five year plan is the amount of issued and the mapping to Tx and Dx. For example, in October of 2013, Hydro One Inc. issued \$750 million of five-year notes with a 2.78% coupon rate, of which \$337.5 million was mapped to Hydro One Distribution, as shown on line 31 of Exhibit B2, Tab 1, Schedule 2, Page 6.

- a) Please provide detail of the projected new debt requirements of HO and the forecast split between Tx and Dx Reconcile to Table 3 (Page 7).
- b) How will adjustments to the amounts of debt issued by HO and mapped to Tx and Dx be made during the plan period? Please discuss in detail.

**Response**

- a) The projected new debt requirements of Hydro One Inc. and the forecast split between Tx and Dx are in the following table.

**Forecast Debt Issues for 2015 to 2019**

Year	Principal Amount (\$Millions)			Term (Years)	Coupon
	Dx	Tx	Hydro One Inc.		
<b>2015</b>	89.6	159.3	250.0	5	3.80%
	89.6	159.3	250.0	10	4.79%
	89.6	159.3	250.0	30	5.63%
<b>2016</b>	144.0	197.5	350.0	5	4.30%
	144.0	197.5	350.0	10	5.29%
	144.0	197.5	350.0	30	6.13%
<b>2017</b>	133.8	213.5	350.0	5	4.70%
	133.8	213.5	350.0	10	5.69%
	133.8	213.5	350.0	30	6.53%
<b>2018</b>	169.5	199.5	350.0	5	4.80%
	169.5	199.5	350.0	10	5.79%
	169.5	199.5	350.0	30	6.63%
<b>2019</b>	78.1	86.2	175.0	5	4.80%
	78.1	86.2	175.0	10	5.79%
	78.1	86.2	175.0	30	6.63%

The above principal amounts exclude the refinancing of deemed short term debt. The above principal amounts for Dx and Tx may not add up to the principal amount for Hydro One Inc. because Hydro One Inc. also allocates a portion of its debt to Hydro One Brampton and Hydro One Remotes.

- b) Please see Exhibit I, Tab 6.2, Schedule 11 EP 42, part a), for a response regarding updating to reflect to take into account the actual debt issuances during the plan period.

As discussed in the response to Exhibit I, Tab 6.2, Schedule 11 EP 42, part c), mapping to Hydro One Dx and Tx shown in the table above is based upon forecast borrowing requirements, which is driven mainly by debt retirement, capital expenditures net of internally generated funds, and the maintenance of its capital structure, as discussed in Exhibit B1, Tab 2, Schedule 1, page 2, lines 18 and 19. The actual amount of debt issued by Hydro One Inc. and mapped to Tx and Dx will be based on the actual borrowing requirements of each business.

**Vulnerable Energy Consumers Coalition (VECC) INTERROGATORY #75**

**Issue 6.3**      **Is the depreciation component of the revenue requirement for 2015 as set out in the Custom Application appropriate?**

**Interrogatory**

**Reference:**    A/T2/S1/pg. 9

- a) Please provide the revenue requirement for 2016 through 2019 assuming the cost of capital (debt and equity) is fixed for the 5 year period.
- b) Please provide the rate impacts (unmitigated) under the same scenario.

**Response**

a) and b) Please see table provided below:

	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Total revenue requirement \$M	1506.8	1548.3	1576.1	1609.0
Rate Impact	6.1%	2.0%	1.5%	1.9%

**Vulnerable Energy Consumers Coalition (VECC) INTERROGATORY #76**

**Issue 6.3 Is the depreciation component of the revenue requirement for 2015 as set out in the Custom Application appropriate?**

**Interrogatory**

**Reference: B1**

- a) Please provide the actual returns of Hydro One Inc. and notional regulated rates of return of Hydro One Distribution for each of the years 2008 through 2013

**Response**

- a) The actual regulated ROE for the years 2010 to 2013, found in the table below, have been calculated using the revised template for reporting regulatory return (ROE) under Section 2.1.5.6 of the Reporting & Record Keeping Requirements for Electricity issued by the Board on March 14, 2014.

Hydro One was not able to calculate the actual regulated ROE on a deemed basis for 2008 and 2009 using the Board's model. The model used by the Board reflects the Board's current cost of capital parameter calculation methodology implemented only since December 2009, when the Board issued its cost of capital report in EB-2009-0084.

Year	Actual Regulated ROE	Allowed ROE	Under-earning
2010	8.46%	9.85%	-1.39%
2011	9.05%	9.66%	-0.61%
2012	8.94%	9.66%	-0.72%
2013	8.01%	9.66%	-1.65%
2014	8.34% <sup>1</sup>	9.66%	-1.32%

Note 1: The figure in 2014 is a forecast number calculated using information found in Exhibit 1-12-2 and Exhibit D2-1-1.



**Vulnerable Energy Consumers Coalition (VECC) INTERROGATORY #77**

**Issue 6.3      Is the depreciation component of the revenue requirement for 2015 as set out in the Custom Application appropriate?**

**Interrogatory**

**Reference:    C1/T6/S1/pg. 2**

a) Please explain how the asset removal costs are forecast for 2015 through 2019.

**Response**

a) Generally, previous year's actuals are used to predict the removal rate of future work for programs that replace similar assets year after year.

The amount of removal costs for a project is identified when the cost estimate is done for the particular project. For projects far in the future where the scope of the project is less clear and where a detailed estimate has not been prepared, the planner reviews the actuals for a similar project to forecast the project cost including the amount of removals expected. If necessary, the planner also engages the field staff to estimate the asset removal costs.

**Ontario Energy Board (Board Staff) INTERROGATORY #88**

**Issue 6.4 Is the taxes / PILs component of the revenue requirement for 2015 as set out in the Custom Application appropriate?**

**Interrogatory**

**Reference: Exhibit C2/Tab5/Schedule1/Attachment 1 (Calculation of Utility Income Taxes)**

- a) The regulatory net income before tax amounts for test years 2015-2019 do not agree with the earnings before tax in exhibit A/T12/S2 for the same periods. Please provide a reconciliation of the differences and explain which net income before tax numbers are correct.
- b) Removal costs are shown in the tax calculations and in depreciation expense [C2/T4/S1/page2] but the dollar amounts are significantly different.

<b>Removal Costs (\$ millions)</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
In Depreciation	54.5	57.0	60.4	63.3	65.8
In PILs calculations	6.0	6.0	6.0	6.0	6.0

- i) Please explain what costs are included in asset removal costs in depreciation.
- ii) Please explain what costs are included in asset removal costs in the PILs calculations.
- c) Other post-employment benefits payments are shown below.

<b>OPEBs (\$ millions)</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
In PILs calculations	31.1	33.7	35.6	37.4	39.7

- i) Are the OPEB payment amounts those costs related to OM&A or are these OPEBs contained in both OM&A and capital additions?
- ii) Please provide a table that shows the OM&A and capital components for each year 2015-2019 similar to the tables in C1/T3/S3/pages2-3.
- d) Capitalized overhead costs in the PILs calculations are shown below. Please note that capitalized pension costs are identified separately in the PILs calculations and in the pension analysis in C1/T3/S3/pages2-3.

<b>Capitalized overhead (\$ millions)</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
In PILs calculations	21.8	20.7	20.4	20.9	21.7

Capitalized overhead costs in C1/T5/S2/page3 for 2015-2019 are shown below.

<b>Overhead Cost Category (\$ millions)</b>	<b>Test Years</b>				
	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Capitalized Administrative & General Costs	69.5	65.4	64.4	67.1	69.7
Capitalized Operating Costs	16.4	16.0	15.9	15.3	15.6
<b>Total</b>	85.9	81.4	80.2	82.5	85.3

- i) Please provide an analysis and tables that show the split between transmission and distribution capitalized overheads.
- ii) If the amounts for distribution from this analysis in part (i) above are different than the amounts used in the PILs calculations, please provide analysis and commentary to explain why they should be different.

### **Response**

- a) The figures in Exhibit C2, Tab5, Schedule1, Attachment 1 (Calculation of Utility Income Taxes) are calculated for regulatory purposes to determine the revenue requirement for the test years; whereas the figures in the pro-forma statement are calculated for income tax purposes and include all of the non-regulatory items that are excluded in the other calculation.

Reconciliation between pro-forma utility taxes to income taxes calculated for revenue requirement cannot be done. Under the taxes payable method, no provision is made for future income taxes that result from timing differences between the tax basis of assets and liabilities and their carrying amounts for accounting purposes. Accordingly, the taxes payable method will result in the PILs income tax payable being different from the amount that would have been recorded, had the combined Canadian Federal and Ontario statutory income tax rate been applied to the regulatory net income before tax. When unrecorded future income taxes become payable, it is expected that they will be included in the rates approved by the Board and recovered from customers at that time.

1 b)

2 i) Asset removal costs include the costs related to the decommissioning of an asset  
3 at the end of its useful life. The decommissioned asset may or may not be  
4 replaced depending on the facts surrounding the situation. Asset removal costs  
5 are not included in the rate base and are expensed through depreciation.

6  
7 ii) The removal costs deducted in the “Calculation of Utility Income Tax” relates  
8 specifically to removal costs which are not associated with the replacement or  
9 enhancement of a specific asset.

10  
11 For tax purposes, a number of criteria are used to determine whether expenditure  
12 is considered to be capital or a current expenditure. Generally, expenditures  
13 which extend the life of an asset or results in a betterment of the asset are capital  
14 in nature and are not deductible for tax.

15  
16 c)

17 i) The OPEB payment in the schedule above relate to OPEB in both OM&A and  
18 capital additions.

19  
20 ii) The OPEB expenses are allocated between OMA & Capital. OPEB payments  
21 relate to the overall OPEB liability and are not separated between OMA &  
22 Capital.

23  
24 For tax purposes, OPEB costs are deducted when paid. The OPEB payments for  
25 2015 to 2019 have been deducted in the “Calculation of Utility Income Tax” in  
26 Exhibit C2, Tab5, Schedule1, Attachment 1.

27  
28 Accruals of OPEB expenses are not deductible for tax purposes. OPEB expenses  
29 included in OM&A are added back in the “Calculation of Utility Income Tax”.  
30 Capitalized OPEB costs are removed from the UCC additions over 3 years based  
31 on an agreement with the Ministry of Finance (see response to Exhibit I, Tab 6.4,  
32 Schedule 1 Staff 89 for more information).

33  
34 d)

35 i) The capitalized overhead in the tables presented is for distribution only.

36  
37 ii) Only a portion of the capitalized overhead is deductible for tax.

38  
39 The amount of capitalized overhead that is deductible for tax is determined  
40 pursuant to a Ministry of Finance audit agreement. Under this methodology  
41 approximately 25% of capitalized overhead is considered deductible for tax  
42 purposes.

43

1           For tax purposes, only the portion of capitalized overhead not directly related to  
2           the acquisition or construction of fixed assets are deductible. Any capitalized  
3           overhead costs deducted for tax are removed from UCC additions over 3 years  
4           pursuant to an agreement with the Ministry of Finance (see response to Exhibit I,  
5           Tab 6.4, Schedule 1 Staff 89 for more information).

**Ontario Energy Board (Board Staff) INTERROGATORY #89**

**Issue 6.4 Is the taxes / PILs component of the revenue requirement for 2015 as set out in the Custom Application appropriate?**

**Interrogatory**

**Reference: Exhibit C2/Tab5/Schedule1/pp. 1-2 Attachment 2 (Calculation of Capital Cost Allowance (“CCA”))**

In-service capital additions for 2015-2019 in rate base [D1/T1/S1/page6/Table5] are different than net capital additions in the tables where CCA has been calculated for 2015-2019.

Please provide a reconciliation and commentary to explain the difference between in-service capital additions in rate base and net capital additions for CCA purposes.

**Response**

The table below reconciles the in-service capital additions to the net capital additions shown in Exhibit C2, Tab5, Schedule1, Attachment 2, pages 1-2 (Calculation of Capital Cost Allowance (“CCA”). The differences are due to adjustments made to in-service capital additions for income tax purposes, specifically to calculate the CCA claim.

	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
<b>In-service Capital Additions per D1-1-2</b>	<b>656.6</b>	<b>621.8</b>	<b>696.0</b>	<b>681.4</b>	<b>660.9</b>
Plus: Asset removal costs	47.1	48.1	51.3	54.2	57.2
Less: Interest capitalized	(17.0)	(18.0)	(19.7)	(21.4)	(22.2)
Less: Overheads capitalized	(21.6)	(21.3)	(21.0)	(20.7)	(21.0)
Less: Depreciation capitalized	(13.9)	(13.2)	(13.6)	(14.0)	(14.4)
Less: Capitalized OPEB	(34.8)	(33.3)	(29.9)	(27.4)	(26.0)
Less: Capitalized Pension	(41.7)	(43.8)	(44.1)	(44.0)	(44.8)
Plus: Capital amounts expensed under 2K	6.7	6.7	6.7	6.7	6.7
Less: Land	(0.2)	(0.3)	(0.3)	(0.3)	(0.3)
<b>Capital Expenditures per C2-5-1</b>	<b>581.2</b>	<b>546.7</b>	<b>625.4</b>	<b>614.5</b>	<b>596.1</b>

Capitalized amounts such as Interest, depreciation, and pension, are deducted for tax.

These amounts reduce UCC over 3 year period based on a Ministry of Finance audit agreement.

**School Energy Coalition (SEC) INTERROGATORY #53**

**Issue 6.4      Is the taxes / PILs component of the revenue requirement for 2015 as set out in the Custom Application appropriate?**

**Interrogatory**

**Reference: Exhibit C1/Tab 2/Schedule 12/p.3**

Please explain how the Applicant forecasted property tax expenses for the test period.

**Response**

Property tax forecasts for test years 2015 - 2019 are based on the following assumptions:

- annual increases in property taxes of 4% for test years 2015 – 2019, resulting from increasing property values due to re-assessments and changes in the municipal tax rates; and
- no legislative or other tax changes (including changes to municipal assessments) relative to Hydro One properties.

**Ontario Energy Board (Board Staff) INTERROGATORY #90**

**Issue 6.6** Is the load forecast a reasonable reflection of the energy and demand requirements of the applicant? Is the forecast of other rates and charges appropriate? Is the forecast of other revenues appropriate?

**Interrogatory**

**Reference:** Exhibit A/Tab16/Schedule2/p. 3

In its May 30, 2014 update Hydro One updated a number of areas in the Tab 16, Economic Indicators/Load Forecast Exhibit. Please provide a summary of the significant changes made in the update and the impact of these changes on the application.

**Response**

As explained in Exhibit A, Tab 16, Schedule 2, lines 9-11, the updated load forecast included changes in 3 areas: latest economic forecast, 2013 actual purchases and CDM consistent with 2013 LTEP. Table 1 compares the changes in GDP and housing starts assumptions. Table 2 presents the changes in load forecast before CDM deductions. The change due to updated economic assumptions was small and most of the impact was due to the change in 2013 actuals. Table 3 compares the changes in CDM consistent with 2013 LTEP. Table 4 compares the changes in load forecast after CDM deductions. The impact of these changes is summarized below:

Year	Total Change in Load Forecast for May 2014 Update in GWh	Change in Load Due to 2013 Actuals and Updated Economic Forecast in GWh	Change in Load Due to CDM Consistent with 2013 LTEP in GWh
2013	323	405	-82
2014	564	478	85
2015	828	449	379
2016	1047	444	604
2017	1426	252	1174
2018	1696	342	1353
2019	1641	405	1235

Note: Numbers may not add up due to rounding



**Table 1**

**Comparison of Consensus Forecasts for Ontario**

Year	GDP Growth (%)	Housing Starts (1,000)
<u>Forecast used in December 2013 Submission</u>		
2013	1.4	59.3
2014	2.2	57.9
2015	2.7	67.9
2016	2.7	72.1
2017	2.6	73.6
2018	2.2	68.7
2019	2.0	69.0
<u>Forecast used in May 2014 Update</u>		
2013	1.2	60.7
2014	2.2	59.0
2015	2.6	60.3
2016	2.7	68.8
2017	2.8	72.1
2018	2.6	75.3
2019	2.4	69.2
<u>Change: May 2014 Less December 2013 Forecast</u>		
2013	-0.2	1.4
2014	0.0	1.0
2015	-0.1	-7.6
2016	0.0	-3.3
2017	0.2	-1.5
2018	0.4	6.6
2019	0.4	0.2

**Table 2**

**Comparison of Load Forecasts before CDM Deductions (GWh)**

Year	Retail Customers	Embedded Customers	Total
<u>Forecast used in December 2013 Submission</u>			
2013	21,706	17,895	39,601
2014	21,720	17,964	39,685
2015	21,876	18,065	39,941
2016	22,038	18,188	40,226
2017	22,369	18,332	40,702
2018	22,568	18,454	41,022
2019	22,771	18,581	41,352
<u>Forecast used in May 2014 Update</u>			
2013	21,723	18,283	40,006
2014	21,749	18,414	40,163
2015	21,871	18,518	40,389
2016	22,046	18,623	40,670
2017	22,224	18,729	40,953
2018	22,471	18,894	41,365
2019	22,708	19,049	41,757
<u>Change: May 2014 Less December 2013 Forecast</u>			
2013	17	388	405
2014	29	449	478
2015	-5	454	449
2016	9	435	444
2017	-145	397	252
2018	-97	439	342
2019	-63	469	405

**Table 3**

**Comparison of the CDM Impact on Load (GWh)**

Year	Retail Customers	Embedded Customers	Total
<u>Forecast used in December 2013 Submission</u>			
2013	1,348	1,064	2,412
2014	1,424	1,317	2,740
2015	1,580	1,568	3,148
2016	1,709	1,740	3,449
2017	2,063	1,956	4,019
2018	2,407	2,200	4,607
2019	2,656	2,375	5,031
<u>Forecast used in May 2014 Update</u>			
2013	1,284	1,210	2,494
2014	1,336	1,319	2,655
2015	1,374	1,395	2,769
2016	1,417	1,429	2,845
2017	1,416	1,429	2,846
2018	1,646	1,608	3,253
2019	1,949	1,847	3,796
<u>Change: May 2014 Less December 2013 Forecast</u>			
2013	-63	145	82
2014	-88	3	-85
2015	-207	-173	-379
2016	-293	-311	-604
2017	-647	-527	-1,174
2018	-761	-593	-1,353
2019	-707	-528	-1,235

**Table 4**

**Comparison of Load Forecasts after CDM Deductions (GWh)**

Year	Retail Customers	Embedded Customers	Total
<u>Forecast used in December 2013 Submission</u>			
2013	20,358	16,831	37,189
2014	20,297	16,648	36,944
2015	20,295	16,497	36,793
2016	20,328	16,449	36,777
2017	20,306	16,376	36,682
2018	20,161	16,254	36,416
2019	20,115	16,206	36,321
<u>Forecast used in May 2014 Update</u>			
2013	20,439	17,073	37,512
2014	20,413	17,095	37,508
2015	20,497	17,123	37,620
2016	20,630	17,194	37,824
2017	20,808	17,300	38,108
2018	20,825	17,286	38,111
2019	20,759	17,203	37,961
<u>Change: May 2014 Less December 2013 Forecast</u>			
2013	81	242	323
2014	117	447	564
2015	201	626	828
2016	301	746	1,047
2017	502	924	1,426
2018	664	1,032	1,696
2019	644	997	1,641

**Ontario Energy Board (Board Staff) INTERROGATORY #91**

**Issue 6.6**      **Is the load forecast a reasonable reflection of the energy and demand requirements of the applicant? Is the forecast of other rates and charges appropriate? Is the forecast of other revenues appropriate?**

**Interrogatory**

**Reference:**    **Exhibit A/Tab16/Schedule 2/p. 17**

Regarding the forecast methodology and the forecasts of other key inputs to the overall forecast, such as: Provincial GDP (noted as a key driver), Population, Housing , Commercial Output Industrial Production & CDM, has Hydro One amended the forecast methodologies to reflect the longer forecast horizon from 2 years to 5 years?

**Response**

No amendments are required because these forecasting models have been used by Hydro One since 1999 to prepare business planning and investment planning forecasts which are 5 years or more.

**Ontario Energy Board (Board Staff) INTERROGATORY #92**

**Issue 6.6**      **Is the load forecast a reasonable reflection of the energy and demand requirements of the applicant? Is the forecast of other rates and charges appropriate? Is the forecast of other revenues appropriate?**

**Interrogatory**

**Reference:**    **Exhibit A/Tab 16/Schedule 2/p. 23**

At Table 6, where a summary of the forecast is provided, in 2017, in the forecast without the influence of CDM, Hydro One has the load growing an abnormal amount of 476 GWh (increase of 1.2%, much higher than other years). What is the principle reason for this increase?

**Response**

The 1.2% of load growth in 2017 before CDM reductions is attributed to the cumulative impact of changes in the growth rate of Ontario GDP that is forecasted to ramp up from 1.4% in 2013 to 2.6%-2.7% in 2015-2017 (Table E.2 in Exhibit A, Tab 16, Schedule 2 filed in December 19, 2013). The latest GDP forecast was used in the forecast update (Table E.2 in Exhibit A, Tab 16, Schedule 2 filed in May 30, 2014) and the corresponding load growth before CDM deductions in Table 6 is 0.7% in 2017 in the updated forecast.

**Ontario Energy Board (Board Staff) INTERROGATORY #93**

**Issue 6.6**      **Is the load forecast a reasonable reflection of the energy and demand requirements of the applicant? Is the forecast of other rates and charges appropriate? Is the forecast of other revenues appropriate?**

**Interrogatory**

**Reference:**    **Exhibit A/Tab 16/Schedule 2/p. 23**

Also at Table 6, the CDM impact is up significantly in 2014 (up 14%) and 2015 (up 15%) and reduction in the increase in 2016 (up only 9.6%) and backup to larger growth in 2017 and 2018 (up 16.5% and 15% respectively) followed by a drop in 2019. What is the reason for these fluctuations in growth of CDM and what specific programs or events are driving these changes in the CDM forecast?

**Response**

The CDM numbers referenced are based on information provided by the OPA consistent with the 2010 LTEP. The numbers fluctuate as per the assumptions used. These CDM numbers were updated in the May 30, 2014 update with information consistent with the 2013 LTEP. The corresponding CDM increases in the update are 7% in 2014, 4% in 2015, 3% in 2016, 0% in 2017, 14% in 2018, and 17% in 2019. Detailed CDM numbers and the categories used are explained in detail in Exhibit A, Tab 16, Schedule 4.

**Sustainable Infrastructure Alliance of Ontario (SIA) INTERROGATORY #53**

**Issue 6.6      Is the load forecast a reasonable reflection of the energy and demand requirements of the applicant? Is the forecast of other rates and charges appropriate? Is the forecast of other revenues appropriate?**

**Interrogatory**

**Reference: Exhibit G2/Tab 5/Schedule 1/p.1**

HONI states that “The rates for any service not covered in Schedule 11-1, but included in the Schedule 11-1 that is part of the 2006 Electricity Distribution Rate Handbook (the Handbook) issued in May 2005 have been reviewed and are acceptable to Hydro One Distribution.” How did HONI determine that these rates “are acceptable”? What type of analysis did HONI perform (and what factors were considered) in making this determination?

**Response**

The rates for the referenced services are common to all LDCs and were established by the OEB. These OEB prescribed charges are considered acceptable based on staff consideration of whether the charges reasonably reflect the cost of providing this service and the magnitude of the revenues generated from these services.



**Sustainable Infrastructure Alliance of Ontario (SIA) INTERROGATORY #54**

**Issue 6.6** Is the load forecast a reasonable reflection of the energy and demand requirements of the applicant? Is the forecast of other rates and charges appropriate? Is the forecast of other revenues appropriate?

**Interrogatory**

**Reference: Exhibit G2/Tab 5/Schedule 1/p.2**

a) For each of the charges that are based on the 2006 Rate Handbook, please provide HONI's estimated actual cost of performing each service on a per unit basis. For clarity, please use the calculation methodology included in Schedule 11-2 of the Rate Handbook updating for HONI's current actual vehicle and labour rates.

b) By how much would HONI's total revenue offsets increase or decrease if its revenue offset forecast amount reflected the actual cost-based charges as calculated in a) above?

**Response**

a) Account Set-Up Charges, Arrears Certificates, Return Cheque Charges, Late Payment Charges, Retailer Service Charges – Establishing Service Agreements and Retail Service Charges – Other (Rate Codes 8, 9, 10, 12, 13a and 13b respectively) are all part of a bundled contract with Hydro One's external service provider. As a result, these charges are not included in the tables in sections a) and b).

Please see tables below.

\* Note: All Direct Labour - Straight Time

\*\* Note: Specific Service Charge Value Requested - Rounded to nearest \$5.00

**Definitions:**

ADET - Area Distribution Engineering Technician

MDET - Metering Distribution Engineering Technician

PLM - Power Line Maintainer

2015 Specific Service Charges - Standard Formula and Amounts

Rate Code	Specific Service Charge Description	Labour Description*	Rate Amount	Hours	Calculated Total	Total Labour	Other Description	Rate Amount	Hours	Calculated Total	Total Other	Total	Rounded Total
1	Temporary Service	Direct Labour - Power Line Maintainer	\$73.13	2.957	\$216.25		Large Vehicle Time	\$65.00	2.957	\$192.21	\$192.21	\$739.20	\$740.00
		Direct Labour - Hiring Hall Apprentice	\$41.02	0.212	\$8.70								
		Direct Labour - MP4 (PDD)	\$105.23	0.003	\$0.32								
		Direct Labour - Clerical	\$72.53	1.378	\$99.95								
		Payroll Burden	68.20%		\$221.79	\$546.99							
2	Dispute Meter Test	Direct Labour - Power Line Maintainer	\$73.13	2	\$146.26		Small Vehicle Time	\$12.50	1	\$12.50	\$77.50	\$454.50	\$455.00
		Direct Labour - MDET	\$77.88	1	\$77.88		Large Vehicle Time	\$65.00	1	\$65.00			
		Payroll Burden	68.20%		\$152.86	\$377.00							
3	Collection of account - no disconnection/load limiter	Direct Labour - Meter Reader	\$57.07	0.1536	\$8.77		Small Vehicle Time	\$12.50	0.96	\$12.00	\$12.00	\$164.80	\$165.00
		Direct Labour - Power Line Maintainer	\$73.13	0.2976	\$21.76								
		Direct Labour - ADET	\$77.88	0.5088	\$39.63								
		Direct Labour - MP2 (PDD)	\$94.53	0.008	\$0.76								
		Direct Labour - MP4 (PDD)	\$105.23	0.004	\$0.42								
		Direct Labour - Clerical (BASC)	\$72.53	0.269	\$19.51								
		Payroll Burden	68.20%		\$61.96	\$152.80							
4	Collection/Disconnect/load limiter/reconnect (at meter) trip - regular hours	Direct Labour - Meter Reader	\$57.07	0.1796	\$10.25		Small Vehicle Time	\$12.50	1.1225	\$14.03	\$14.03	\$186.94	\$185.00
		Direct Labour - Power Line Maintainer	\$73.13	0.34798	\$25.45								
		Direct Labour - ADET	\$77.88	0.59493	\$46.33								
		Direct Labour - MP2 (PDD)	\$94.53	0.008	\$0.76								
		Direct Labour - MP4 (PDD)	\$105.23	0.004	\$0.42								
		Direct Labour - Clerical (BASC)	\$72.53	0.269	\$19.51								
		Payroll Burden	68.20%		\$70.19	\$172.91							
5	Collection/Disconnect/load limiter/reconnect (at meter) trip - after regular hours	Direct Labour - Power Line Maintainer	\$73.13	6.5	\$475.35		Large Vehicle Time	\$65.00	2	\$130.00	\$130.00	\$964.33	\$965.00
		Direct Labour - MP2 (PDD)	\$94.53	0.008	\$0.76								
		Direct Labour - MP4 (PDD)	\$105.23	0.004	\$0.42								
		Direct Labour - Clerical (BASC)	\$72.53	0.269	\$19.51								
		Payroll Burden	68.20%		\$338.29	\$834.33							
6	Collection/Disconnect/load limiter/reconnect (at pole) trip - regular hours	Direct Labour - Power Line Maintainer	\$73.13	3.36	\$245.72		Large Vehicle Time	\$65.00	1.65	\$107.25	\$107.25	\$555.34	\$555.00
		Direct Labour - MP2 (PDD)	\$94.53	0.008	\$0.76								
		Direct Labour - MP4 (PDD)	\$105.23	0.004	\$0.42								
		Direct Labour - Clerical (BASC)	\$72.53	0.269	\$19.51								
		Payroll Burden	68.20%		\$181.63	\$448.09							
7	Collection/Disconnect/load limiter/reconnect (at pole) trip - after regular hours	Direct Labour - Power Line Maintainer	\$73.13	6.5	\$475.35		Large Vehicle Time	\$65.00	2	\$130.00	\$130.00	\$964.33	\$965.00
		Direct Labour - MP2 (PDD)	\$94.53	0.008	\$0.76								
		Direct Labour - MP4 (PDD)	\$105.23	0.004	\$0.42								
		Direct Labour - Clerical (BASC)	\$72.53	0.269	\$19.51								
		Payroll Burden	68.20%		\$338.29	\$834.33							
11	Easement Charge for Unregistered Rights	Direct Labour - Clerical	\$72.53	0.08	\$5.80	\$9.76						\$9.76	\$10.00
		Payroll Burden	68.20%		\$3.96								
14	Special Meter Reads	Direct Labour - Meter Reader	\$73.13	1.1	\$80.44		Small Vehicle Time	\$12.50	1.04	\$13.00	\$13.00	\$148.31	\$150.00
		Payroll Burden	68.20%		\$54.86	\$135.31							

2016 Specific Service Charges - Standard Formula and Amounts

Rate Code	Specific Service Charge Description	Labour Description*	Rate Amount	Hours	Calculated Total	Total Labour	Other Description	Rate Amount	Hours	Calculated Total	Total Other	Total	Rounded Total
1	Temporary Service	Direct Labour - Power Line Maintainer	\$74.27	2.957	\$219.62		Large Vehicle Time	\$65.50	2.957	\$193.68	\$193.68	\$749.55	\$750.00
		Direct Labour - Hiring Hall Apprentices	\$41.59	0.212	\$8.82								
		Direct Labour - MP4 (PDO)	\$106.95	0.003	\$0.32								
		Direct Labour - Clerical	\$73.68	1.378	\$101.53								
		Payroll Burden	68.30%		\$225.59	\$555.87							
2	Dispute Meter Test	Direct Labour - Power Line Maintainer	\$74.27	2	\$148.54		Small Vehicle Time	\$13.00	1	\$13.00	\$78.50	\$461.50	\$460.00
		Direct Labour - MDET	\$79.03	1	\$79.03		Large Vehicle Time	\$65.50	1	\$65.50			
		Payroll Burden	68.30%		\$155.43	\$383.00							
3	Collection of account - no disconnection/load limiter	Direct Labour - Meter Reader	\$57.64	0.1536	\$8.85		Small Vehicle Time	\$13.00	0.96	\$12.48	\$12.48	\$167.63	\$170.00
		Direct Labour - Power Line Maintainer	\$74.27	0.2976	\$22.10								
		Direct Labour - ADET	\$79.03	0.5088	\$40.21								
		Direct Labour - MP2 (PDO)	\$96.26	0.008	\$0.77								
		Direct Labour -MP4 (PDO)	\$106.95	0.004	\$0.43								
		Direct Labour - Clerical (BASC)	\$73.68	0.269	\$19.82								
		Payroll Burden	68.30%		\$62.96	\$155.15							
4	Collection/Disconnect/load limiter/reconnect (at meter) trip - regular hours	Direct Labour - Meter Reader	\$57.64	0.1796	\$10.35		Small Vehicle Time	\$13.00	1.1225	\$14.59	\$14.59	\$190.15	\$190.00
		Direct Labour - Power Line Maintainer	\$74.27	0.348	\$25.84								
		Direct Labour - ADET	\$79.03	0.5949	\$47.02								
		Direct Labour - MP2 (PDO)	\$96.26	0.008	\$0.77								
		Direct Labour -MP4 (PDO)	\$106.95	0.004	\$0.43								
		Direct Labour - Clerical (BASC)	\$73.68	0.269	\$19.82								
		Payroll Burden	68.30%		\$71.32	\$175.55							
5	Collection/Disconnect/load limiter/reconnect (at meter) trip - after regular hours	Direct Labour - Power Line Maintainer	\$74.27	6.5	\$482.76		Large Vehicle Time	\$65.50	2	\$131.00	\$131.00	\$978.85	\$980.00
		Direct Labour - MP2 (PDO)	\$96.26	0.008	\$0.77								
		Direct Labour -MP4 (PDO)	\$106.95	0.004	\$0.43								
		Direct Labour - Clerical (BASC)	\$73.68	0.269	\$19.82								
		Payroll Burden	68.30%		\$344.08	\$847.85							
6	Collection/Disconnect/load limiter/reconnect (at pole) trip - regular hours	Direct Labour - Power Line Maintainer	\$74.27	3.36	\$249.55		Large Vehicle Time	\$65.50	1.65	\$108.08	\$108.08	\$563.44	\$565.00
		Direct Labour - MP2 (PDO)	\$96.26	0.008	\$0.77								
		Direct Labour -MP4 (PDO)	\$106.95	0.004	\$0.43								
		Direct Labour - Clerical (BASC)	\$73.68	0.269	\$19.82								
		Payroll Burden	68.30%		\$184.80	\$455.36							
7	Collection/Disconnect/load limiter/reconnect (at pole) trip - after regular hours	Direct Labour - Power Line Maintainer	\$74.27	6.5	\$482.76		Large Vehicle Time	\$65.50	2	\$131.00	\$131.00	\$978.85	\$980.00
		Direct Labour - MP2 (PDO)	\$96.26	0.008	\$0.77								
		Direct Labour -MP4 (PDO)	\$106.95	0.004	\$0.43								
		Direct Labour - Clerical (BASC)	\$73.68	0.269	\$19.82								
		Payroll Burden	68.30%		\$344.08	\$847.85							
11	Easement Charge for Unregistered Rights	Direct Labour - Clerical	\$73.68	0.08	\$5.89	\$9.92						\$9.92	\$10.00
		Payroll Burden	68.30%		\$4.03								
14	Special Meter Reads	Direct Labour - Meter Reader	\$74.27	1.1	\$81.70		Small Vehicle Time	\$13.00	1.04	\$13.52	\$13.52	\$151.02	\$150.00
		Payroll Burden	68.30%		\$55.80	\$137.50							

2017 Specific Service Charges - Standard Formula and Amounts

Rate Code	Specific Service Charge Description	Labour Description*	Rate Amount	Hours	Calculated Total	Total Labour	Other Description	Rate Amount	Hours	Calculated Total	Total Other	Total	Rounded Total
1	Temporary Service	Direct Labour - Power Line Maintainer	\$75.33	2.957	\$222.75		Large Vehicle Time	\$66.00	2.957	\$195.16	\$195.16	\$759.94	\$760.00
		Direct Labour - Hiring Hall Apprentices	\$42.11	0.212	\$8.93								
		Direct Labour - MP4 (PDO)	\$108.54	0.003	\$0.33								
		Direct Labour - Clerical	\$74.73	1.378	\$102.98								
		Payroll Burden	68.60%		\$229.80	\$564.78							
2	Dispute Meter Test	Direct Labour - Power Line Maintainer	\$75.33	2	\$150.66		Small Vehicle Time	\$13.00	1	\$13.00	\$79.00	\$468.01	\$470.00
		Direct Labour - MDET	\$80.07	1	\$80.07		Large Vehicle Time	\$66.00	1	\$66.00			
		Payroll Burden	68.60%		\$158.28	\$389.01							
3	Collection of account - no disconnection/load limiter	Direct Labour - Meter Reader	\$58.13	0.1536	\$8.93		Small Vehicle Time	\$13.00	0.96	\$12.48	\$12.48	\$169.96	\$170.00
		Direct Labour - Power Line Maintainer	\$75.33	0.2976	\$22.42								
		Direct Labour - ADET	\$80.07	0.5088	\$40.74								
		Direct Labour - MP2 (PDO)	\$97.86	0.008	\$0.78								
		Direct Labour -MP4 (PDO)	\$108.54	0.004	\$0.43								
		Direct Labour - Clerical (BASC)	\$74.73	0.269	\$20.10								
		Payroll Burden	68.60%		\$64.08	\$157.48							
4	Collection/Disconnect/load limiter/reconnect (at meter) trip - regular hours	Direct Labour - Meter Reader	\$58.13	0.1796	\$10.44		Small Vehicle Time	\$13.00	1.1225	\$14.59	\$14.59	\$192.78	\$195.00
		Direct Labour - Power Line Maintainer	\$75.33	0.348	\$26.21								
		Direct Labour - ADET	\$80.07	0.5949	\$47.64								
		Direct Labour - MP2 (PDO)	\$97.86	0.008	\$0.78								
		Direct Labour -MP4 (PDO)	\$108.54	0.004	\$0.43								
		Direct Labour - Clerical (BASC)	\$74.73	0.269	\$20.10								
		Payroll Burden	68.60%		\$72.58	\$178.19							
5	Collection/Disconnect/load limiter/reconnect (at meter) trip - after regular hours	Direct Labour - Power Line Maintainer	\$75.33	6.5	\$489.65		Large Vehicle Time	\$66.00	2	\$132.00	\$132.00	\$993.49	\$995.00
		Direct Labour - MP2 (PDO)	\$97.86	0.008	\$0.78								
		Direct Labour -MP4 (PDO)	\$108.54	0.004	\$0.43								
		Direct Labour - Clerical (BASC)	\$74.73	0.269	\$20.10								
		Payroll Burden	68.60%		\$350.52	\$861.49							
6	Collection/Disconnect/load limiter/reconnect (at pole) trip - regular hours	Direct Labour - Power Line Maintainer	\$75.33	3.36	\$253.11		Large Vehicle Time	\$66.00	1.65	\$108.90	\$108.90	\$571.59	\$570.00
		Direct Labour - MP2 (PDO)	\$97.86	0.008	\$0.78								
		Direct Labour -MP4 (PDO)	\$108.54	0.004	\$0.43								
		Direct Labour - Clerical (BASC)	\$74.73	0.269	\$20.10								
		Payroll Burden	68.60%		\$188.26	\$462.69							
7	Collection/Disconnect/load limiter/reconnect (at pole) trip - after regular hours	Direct Labour - Power Line Maintainer	\$75.33	6.5	\$489.65		Large Vehicle Time	\$66.00	2	\$132.00	\$132.00	\$993.49	\$995.00
		Direct Labour - MP2 (PDO)	\$97.86	0.008	\$0.78								
		Direct Labour -MP4 (PDO)	\$108.54	0.004	\$0.43								
		Direct Labour - Clerical (BASC)	\$74.73	0.269	\$20.10								
		Payroll Burden	68.60%		\$350.52	\$861.49							
11	Easement Charge for Unregistered Rights	Direct Labour - Clerical	\$74.73	0.08	\$5.98	\$10.08						\$10.08	\$10.00
		Payroll Burden	68.60%		\$4.10								
14	Special Meter Reads	Direct Labour - Meter Reader	\$75.33	1.1	\$82.86		Small Vehicle Time	\$13.00	1.04	\$13.52	\$13.52	\$153.23	\$155.00
		Payroll Burden	68.60%		\$56.84	\$139.71							

2018 Specific Service Charges - Standard Formula and Amounts

Rate Code	Specific Service Charge Description	Labour Description*	Rate Amount	Hours	Calculated Total	Total Labour	Other Description	Rate Amount	Hours	Calculated Total	Total Other	Total	Rounded Total
1	Temporary Service	Direct Labour - Power Line Maintair	\$76.33	2.957	\$225.71		Large Vehicle Time	\$66.50	2.957	\$196.64	\$196.64	\$770.29	\$770.00
		Direct Labour - Hiring Hall Apprenti	\$42.60	0.212	\$9.03								
		Direct Labour - MP4 (PDO)	\$110.06	0.003	\$0.33								
		Direct Labour - Clerical	\$75.74	1.378	\$104.37								
		Payroll Burden	69.00%		\$234.21	\$573.65							
2	Dispute Meter Test	Direct Labour - Power Line Maintair	\$76.33	2	\$152.66		Small Vehicle Time	\$13.50	1	\$13.50	\$80.00	\$475.00	\$475.00
		Direct Labour - MDET	\$81.07	1	\$81.07		Large Vehicle Time	\$66.50	1	\$66.50			
		Payroll Burden	69.00%		\$161.27	\$395.00							
3	Collection of account - no disconnection/load limiter	Direct Labour - Meter Reader	\$58.58	0.1536	\$9.00		Small Vehicle Time	\$13.50	0.96	\$12.96	\$12.96	\$172.79	\$175.00
		Direct Labour - Power Line Maintair	\$76.33	0.2976	\$22.72								
		Direct Labour - ADET	\$81.07	0.5088	\$41.25								
		Direct Labour - MP2 (PDO)	\$99.41	0.008	\$0.80								
		Direct Labour -MP4 (PDO)	\$110.06	0.004	\$0.44								
		Direct Labour - Clerical (BASC)	\$75.74	0.269	\$20.37								
		Payroll Burden	69.00%		\$65.25	\$159.83							
4	Collection/Disconnect/load limiter/reconnect (at meter) trip - regular hours	Direct Labour - Meter Reader	\$58.58	0.1796	\$10.52		Small Vehicle Time	\$13.50	1.1225	\$15.15	\$15.15	\$195.99	\$195.00
		Direct Labour - Power Line Maintair	\$76.33	0.34798	\$26.56								
		Direct Labour - ADET	\$81.07	0.59493	\$48.23								
		Direct Labour - MP2 (PDO)	\$99.41	0.008	\$0.80								
		Direct Labour -MP4 (PDO)	\$110.06	0.004	\$0.44								
		Direct Labour - Clerical (BASC)	\$75.74	0.269	\$20.37								
		Payroll Burden	69.00%		\$73.91	\$180.83							
5	Collection/Disconnect/load limiter/reconnect (at meter) trip - after regular hours	Direct Labour - Power Line Maintair	\$76.33	6.5	\$496.15		Large Vehicle Time	\$66.50	2	\$133.00	\$133.00	\$1,008.01	\$1,010.00
		Direct Labour - MP2 (PDO)	\$99.41	0.008	\$0.80								
		Direct Labour -MP4 (PDO)	\$110.06	0.004	\$0.44								
		Direct Labour - Clerical (BASC)	\$75.74	0.269	\$20.37								
		Payroll Burden	69.00%		\$357.25	\$875.01							
6	Collection/Disconnect/load limiter/reconnect (at pole) trip - regular hours	Direct Labour - Power Line Maintair	\$76.33	3.36	\$256.47		Large Vehicle Time	\$66.50	1.65	\$109.73	\$109.73	\$579.68	\$580.00
		Direct Labour - MP2 (PDO)	\$99.41	0.008	\$0.80								
		Direct Labour -MP4 (PDO)	\$110.06	0.004	\$0.44								
		Direct Labour - Clerical (BASC)	\$75.74	0.269	\$20.37								
		Payroll Burden	69.00%		\$191.87	\$469.95							
7	Collection/Disconnect/load limiter/reconnect (at pole) trip - after regular hours	Direct Labour - Power Line Maintair	\$76.33	6.5	\$496.15		Large Vehicle Time	\$66.50	2	\$133.00	\$133.00	\$1,008.01	\$1,010.00
		Direct Labour - MP2 (PDO)	\$99.41	0.008	\$0.80								
		Direct Labour -MP4 (PDO)	\$110.06	0.004	\$0.44								
		Direct Labour - Clerical (BASC)	\$75.74	0.269	\$20.37								
		Payroll Burden	69.00%		\$357.25	\$875.01							
11	Easement Charge for Unregistered Rights	Direct Labour - Clerical	\$75.74	0.08	\$6.06	\$10.24						\$10.24	\$10.00
		Payroll Burden	69.00%		\$4.18								
14	Special Meter Reads	Direct Labour - Meter Reader	\$76.33	1.1	\$83.96		Small Vehicle Time	\$13.50	1.04	\$14.04	\$14.04	\$155.94	\$155.00
		Payroll Burden	69.00%		\$57.93	\$141.90							

2019 Specific Service Charges - Standard Formula and Amounts

Rate Code	Specific Service Charge Description	Labour Description*	Rate Amount	Hours	Calculated Total	Total Labour	Other Description	Rate Amount	Hours	Calculated Total	Total Other	Total	Rounded Total
1	Temporary Service	Direct Labour - Power Line Maintainer	\$77.51	2.957	\$229.20		Large Vehicle Time	\$67.00	2.957	\$198.12	\$198.12	\$780.64	\$780.00
		Direct Labour - Hiring Hall Apprentices	\$43.20	0.212	\$9.16								
		Direct Labour - MP4 (PDO)	\$111.83	0.003	\$0.34								
		Direct Labour - Clerical	\$76.92	1.378	\$106.00								
		Payroll Burden	69.00%		\$237.83	\$582.52							
2	Dispute Meter Test	Direct Labour - Power Line Maintainer	\$77.51	2	\$155.02		Small Vehicle Time	\$13.50	1	\$13.50	\$80.50	\$481.49	\$480.00
		Direct Labour - MDET	\$82.25	1	\$82.25		Large Vehicle Time	\$67.00	1	\$67.00			
		Payroll Burden	69.00%		\$163.72	\$400.99							
3	Collection of account - no disconnection/loss of load	Direct Labour - Meter Reader	\$59.17	0.1536	\$9.09		Small Vehicle Time	\$13.50	0.96	\$12.96	\$12.96	\$175.12	\$175.00
		Direct Labour - Power Line Maintainer	\$77.51	0.2976	\$23.07								
		Direct Labour - ADET	\$82.25	0.5088	\$41.85								
		Direct Labour - MP2 (PDO)	\$101.18	0.008	\$0.81								
		Direct Labour -MP4 (PDO)	\$111.83	0.004	\$0.45								
		Direct Labour - Clerical (BASC)	\$76.92	0.269	\$20.69								
		Payroll Burden	69.00%		\$66.21	\$162.16							
4	Collection/Disconnect/load limiter/reconnect (at meter) trip - regular hours	Direct Labour - Meter Reader	\$59.17	0.1796	\$10.63		Small Vehicle Time	\$13.50	1.1225	\$15.15	\$15.15	\$198.62	\$200.00
		Direct Labour - Power Line Maintainer	\$77.51	0.34798	\$26.97								
		Direct Labour - ADET	\$82.25	0.59493	\$48.93								
		Direct Labour - MP2 (PDO)	\$101.18	0.008	\$0.81								
		Direct Labour -MP4 (PDO)	\$111.83	0.004	\$0.45								
		Direct Labour - Clerical (BASC)	\$76.92	0.269	\$20.69								
		Payroll Burden	69.00%		\$74.99	\$183.47							
5	Collection/Disconnect/load limiter/reconnect (at meter) trip - after regular hours	Direct Labour - Power Line Maintainer	\$77.51	6.5	\$503.82		Large Vehicle Time	\$67.00	2	\$134.00	\$134.00	\$1,022.54	\$1,025.00
		Direct Labour - MP2 (PDO)	\$101.18	0.008	\$0.81								
		Direct Labour -MP4 (PDO)	\$111.83	0.004	\$0.45								
		Direct Labour - Clerical (BASC)	\$76.92	0.269	\$20.69								
		Payroll Burden	69.00%		\$362.78	\$888.54							
6	Collection/Disconnect/load limiter/reconnect (at pole) trip - regular hours	Direct Labour - Power Line Maintainer	\$77.51	3.36	\$260.43		Large Vehicle Time	\$67.00	1.65	\$110.55	\$110.55	\$587.78	\$590.00
		Direct Labour - MP2 (PDO)	\$101.18	0.008	\$0.81								
		Direct Labour -MP4 (PDO)	\$111.83	0.004	\$0.45								
		Direct Labour - Clerical (BASC)	\$76.92	0.269	\$20.69								
		Payroll Burden	69.00%		\$194.84	\$477.23							
7	Collection/Disconnect/load limiter/reconnect (at pole) trip - after regular hours	Direct Labour - Power Line Maintainer	\$77.51	6.5	\$503.82		Large Vehicle Time	\$67.00	2	\$134.00	\$134.00	\$1,022.54	\$1,025.00
		Direct Labour - MP2 (PDO)	\$101.18	0.008	\$0.81								
		Direct Labour -MP4 (PDO)	\$111.83	0.004	\$0.45								
		Direct Labour - Clerical (BASC)	\$76.92	0.269	\$20.69								
		Payroll Burden	69.00%		\$362.78	\$888.54							
11	Easement Charge for Unregistered Rights	Direct Labour - Clerical	\$76.92	0.08	\$6.15	\$10.40						\$10.40	\$10.00
		Payroll Burden	\$0.69		\$4.25								
14	Special Meter Reads	Direct Labour - Meter Reader	\$59.17	1.1	\$65.09		Small Vehicle Time	\$13.50	1.04	\$14.04	\$14.04	\$124.04	\$125.00
		Payroll Burden	69.00%		\$44.91	\$110.00							

1 b) If HONI were to implement actual cost-based charges, revenues would increase significantly, as indicated in the tables below.

Specific Service Charges - Revenue

Rate Code	Description	Amount	Historical Years				Bridge Year		Test Years				
			2010	2011	2012	2013	2014		2015				
			Volume	Volume	Volume	Volume	Volume Forecast	Revenue Forecast	Volume Forecast	Revenue Forecast using 2006 RateBook Rate	HONI Actual Cost of Service	Revenue Forecast using HONI Actual Cost of Service	Revenue Increase/Decrease Using HONI Actual Cost of
1	Temporary Service	\$500.00	510	420	443	414	312	\$15,600.00	312	\$156,000.00	\$740.00	\$230,880.00	\$74,880.00
2	Dispute Meter Test	\$30 plus Measurement Canada fees	157	133	133	133	133	\$3,990	133	\$3,990	\$455	\$60,515	\$56,525
3	Collection of account – no disconnection/load limiter	\$30.00	2,225	1,528	2,461	1,325	1,885	\$56,550	1885	\$56,550	\$165	\$311,025.00	\$254,475
4	Disconnect/load limiter/reconnect-regular hours	\$65.00	21,626	16,898	25,169	13,137	25,169	\$1,635,985	25,169	\$1,635,985	\$185	\$4,656,265	\$3,020,280
5	Disconnect/load limiter/reconnect (at meter) trip – after regular hours	\$185.00	1365	1028	492	266	266	\$49,210	266	\$49,210	\$965	\$256,690	\$207,480
6	Disconnect/load limiter/reconnect (at pole) trip – regular hours	\$185.00	1,257	963	1,495	579	1,074	\$198,690.00	1,074	\$198,690	\$555	\$596,070.00	\$397,380
7	Disconnect/load limiter/reconnect (at pole) trip – after regular hours	\$415.00	39	26	20	9	9	\$3,735	9	\$3,735	\$965	\$8,685	\$4,950
11	Easement Charge for Unregistered Rights	\$15.00	5300	3700	4500	4200	4425	\$66,375	4425	\$66,375	\$10	\$44,250	(\$22,125)
14	Special Meter Reads*	\$30.00	0	0	0	0	0	\$0.00	0	\$0.00	\$150.00	\$0.00	\$0.00
Revenue Increase by Year													\$3,993,845.00

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Specific Service Charges - Revenue

Rate Code	Description	Test Years									
		2016					2017				
		Volume Forecast	Revenue Forecast using 2006 RateBook Rate	HONI Actual Cost of Service	Revenue Forecast using HONI Actual Cost of Service	Revenue Increase/Decrease Using HONI Actual Cost of	Volume Forecast	Revenue Forecast using 2006 RateBook Rate	HONI Actual Cost of Service	Revenue Forecast using HONI Actual Cost of Service	Revenue Increase/Decrease using HONI Actual Cost of
1	Temporary Service	312	\$156,000.00	\$750.00	\$234,000.00	\$78,000.00	312	\$156,000.00	\$760.00	\$237,120.00	\$81,120.00
2	Dispute Meter Test	133	\$3,990	\$460	\$61,180	\$57,190	133	\$3,990	\$470	\$62,510	\$58,520
3	Collection of account - no disconnection/load limiter	1885	\$56,550	\$170	\$320,450.00	\$263,900	1885	\$56,550	\$170	\$320,450.00	\$263,900
4	Disconnect/load limiter/reconnect-regular hours	25,169	\$1,635,985	\$190	\$4,782,110	\$3,146,125	25,169	\$1,635,985	\$195	\$4,907,955	\$3,271,970
5	Disconnect/load limiter/reconnect (at meter) trip - after regular hours	266	\$49,210	\$980	\$260,680	\$211,470	266	\$49,210	\$995	\$264,670	\$215,460
6	Disconnect/load limiter/reconnect (at pole) trip - regular hours	1,074	\$198,690	\$565	\$606,810.00	\$408,120	1,074	\$198,690.00	\$570.00	\$612,180.00	\$413,490.00
7	Disconnect/load limiter/reconnect (at pole) trip - after regular hours	9	\$3,735	\$980	\$8,820	\$5,085	9	\$3,735	\$995	\$8,955	\$5,220
11	Easement Charge for Unregistered Rights	4425	\$66,375	\$10	\$44,250	(\$22,125)	4425	\$66,375	\$10	\$44,250	(\$22,125)
14	Special Meter Reads*	0	\$0.00	\$150.00	\$0.00	\$0.00	0	\$0.00	\$155.00	\$0.00	\$0.00
Revenue Increase by Year						\$4,147,765.00					\$4,287,555.00





**Vulnerable Energy Consumers Coalition (VECC) INTERROGATORY #78**

**Issue 6.6**      **Is the load forecast a reasonable reflection of the energy and demand requirements of the applicant? Is the forecast of other rates and charges appropriate? Is the forecast of other revenues appropriate?**

**Interrogatory**

**Reference:**    **A/T16/S2, pg. 3 (Updated)**

**Preamble:**     Hydro One Networks' current application addresses rates for an initial "Plan Year" plus four more subsequent years.

- a) With respect to the footnote for Table 1, please confirm that "Retail Customers" represent all customers except those in the ST class.
- b) Please provide a schedule similar to Table 1 but include the variances as between past forecasts and actual sales for the 4<sup>th</sup> and 5<sup>th</sup> years.

**Response**

a) This is to confirm that “retail customers” represent all customers except those in the ST class.

b) The requested information is provided below:

**Comparison of Hydro One Distribution Forecast with Actual**

**(Variance of forecast expressed as percent of actual on weather corrected basis)**

Forecast made for Plan Year	Variance for Plan Year	Variance for 2 <sup>nd</sup> Year	Variance for 3 <sup>rd</sup> Year	Variance for 4 <sup>th</sup> Year	Variance for 5 <sup>th</sup> Year
1997	0.12	-2.03	1.91	4.59	0.00
1998	-2.03	-3.39	-2.02	-2.56	-1.05
1999	-0.85	0.73	-0.15	1.57	0.74
2000	0.46	-0.03	0.76	0.04	-0.36
2001	-1.80	-1.56	-2.44	-2.83	-2.57
2002	1.98	2.39	2.12	2.73	3.01
2003	-0.82	-1.37	-0.74	-0.36	-0.13
2004	0.14	0.62	0.76	0.83	1.83
2005	0.25	0.12	0.46	1.69	2.40
2006	-0.06	-0.12	0.99	1.68	1.93
2007	-0.09	0.93	1.59	2.14	2.92
2008	-0.57	0.54	0.70	0.67	1.16
2009	-0.14	-0.25	-0.78	0.62	0.18
2010	1.24	0.28	-0.73	-0.07	N/A
2011	0.22	0.34	-0.24	N/A	N/A
2012	0.54	-0.51	N/A	N/A	N/A
2013	-0.59	N/A	N/A	N/A	N/A
Mean (1997-2001)	-0.82	-1.26	-0.96	0.91	-0.10
One std. dev. (+/-)	1.13	2.57	3.00	3.65	4.38
Mean (2002-2013)	0.19	0.27	0.41	1.10	1.66
One std. dev. (+/-)	1.07	2.42	2.79	3.40	4.07

**Vulnerable Energy Consumers Coalition (VECC) INTERROGATORY #79**

**Issue 6.6**      **Is the load forecast a reasonable reflection of the energy and demand requirements of the applicant? Is the forecast of other rates and charges appropriate? Is the forecast of other revenues appropriate?**

**Interrogatory**

**Reference:**    A/T16/S2, pg. 5 (Updated)  
                      A/T16/S2, pg. 5 (As originally filed)  
                      A/T16/S2, pg. 13  
                      A/T16/S2, Appendix E, Table E.4

- a) Please explain more fully how the customer count forecast for each customer class is developed.
- b) With respect to the updated Table E.4, please confirm that the value reported for 2013 (1,267,680) is the actual mid-year customer count.
- c) Please explain why the 2015-2019 total customer counts in the May update are lower than those in the initial Application, even though the actual value for 2013 is higher than originally forecast and the forecast customer count for 2014 is now higher than originally forecast.

**Response**

- a) Customer count forecast is developed taking into account overall growth of the number of households in Ontario as well as the load growth by rate class.

For residential customers, the consensus forecast of housing starts is used to forecast the change in the number of households in Ontario and hence the change in the number of retail residential customers. Historical share of retail in the number of households in Ontario and its dynamics over time is taken into account. Over the forecast period, residential load growth also contributes to the forecast of the number of residential customers.

For other rate classes, two basic factors affecting the number of customer forecast are considered. First, load growth for these classes as determined by the overall economic factors. Second, residential customers' changes within the retail territory are considered as most general service customers serve the retail community.

- 1    b) The actual mid-year figure for 2013 was not available at the time the forecast was  
2       prepared. The figure 1,267,680 is a forecast.  
3
- 4    c) In the May update, the forecast of mid-year number of customers was revised in  
5       relation to changes in the consensus forecast of housing starts (affecting the number  
6       of households) as well as changes in the load forecast. In particular, the May update  
7       of housing starts forecast was higher in the years 2013 and 2014 and lower in 2015  
8       compared to the December 2013 forecast. Please see the response to Exhibit I, Tab  
9       6.6, Schedule 1 Staff 90, Table 1 for a comparison of changes in the consensus  
10      forecast.

**Vulnerable Energy Consumers Coalition (VECC) INTERROGATORY #80**

**Issue 6.6**      **Is the load forecast a reasonable reflection of the energy and demand requirements of the applicant? Is the forecast of other rates and charges appropriate? Is the forecast of other revenues appropriate?**

**Interrogatory**

**Reference:**    **A/T16/S2, pg. 12 and pg. 49 (Updated)**  
                     **A/T16/S3, pg. 4, Table 1 (Updated)**

- a) With respect to Table 3 (A/T16/S2), which years' values are actual results versus forecast results?
- b) If, as stated at A/T16/S2, page 1 (lines 16-17, the values reported in Table 3 are at the wholesale level, please provide the end-use equivalents and explain the basis for the loss factors used.
- c) Please reconcile the 2012 and 2013 CDM values for Retail Customers reported in Table 3 (A/T16/S2) with those reported in Table 1 (A/T16/S3). Note: The values in Table 3 are lower than those in Table 1 even though those in the former table are purportedly wholesale values while those in the later are end-use.
- d) Please reconcile the 2013 values reported in Table 3 (A/T16/S2) with those reported in Table E.9 (A/T16/S2).

**Response**

- a) In Table 3, 2012 and 2013 are actuals and 2014-2019 are forecast values. Please note 2013 values are estimated actuals using preliminary actual results from the OPA.
- b) Table 3 figures below are expressed at the sales level. The CDM impact was originally prepared by rate class (see the revised table provided in response to question (d) below) and aggregated to be consistent at the Retail total level. For ST customers, 3.4% line loss was used for conversion.

**CDM Impact on Hydro One Distribution Sales**  
**(GWh)**

Year	Retail Customers	ST Customers		Total
		Direct	LDC	
2012	1,142	399	681	2,221
2013	1,186	407	763	2,356
2014	1,233	412	864	2,509
2015	1,268	413	936	2,617
2016	1,308	415	967	2,689
2017	1,307	406	976	2,690
2018	1,519	439	1,116	3,074
2019	1,799	488	1,298	3,585

Note. All figures are weather-normal.

- c) The 2012 and 2013 Total Annual Savings from Table 1 (A/T16/S3) are at the end-use level and are equivalent to the wholesale values for retail customers plus ST Direct Customers reported in Table 3 (A/T16/S2) multiplied by the appropriate loss factors.

		2012	2013
Retail CDM Impact at Wholesale Level (A/T16/2/Table 3)	[A]	1,237	1284
ST Direct CDM Impact at Wholesale Level (A/T16/2/Table 3)	[B]	412	421
Retail loss factor	[C]	1.08322	1.08322
ST Direct loss factor	[D]	1.034	1.034
Total CDM at End-Use Level (A/T16/3/Table 1)	[A/C]+[B/D]	1540.2	1592.5

- d) The values in Table E.9 (Exhibit A, Tab 16, Schedule 2) are incorrect. The correct numbers are provided below and are at the end use level. The total values are equivalent to the wholesale values for retail customers plus ST Direct Customers reported in Table 3 (Exhibit A, Tab 16, Schedule 2) divided by the appropriate loss factors. For 2013 the calculation is  $(1,284/1.08322)+(421/1.034)=1,593$  GWh.

**Table E.9**  
**Hydro One Distribution CDM Impacts (GWh) by Rate Class**

Rate class	2013	2014	2015	2016	2017	2018	2019
R1	212	227	263	277	282	348	430
R2	265	283	265	279	284	350	433
UR	77	82	107	113	115	142	175
Seasonal	33	35	25	27	27	34	42
GSE	233	236	217	218	214	231	257
UGE	38	39	59	59	58	62	69
GSD	265	268	229	230	226	244	271
UGD	62	63	103	104	101	110	122
ST	407	412	413	415	406	439	488
Total	1593	1645	1681	1723	1714	1958	2288



**Vulnerable Energy Consumers Coalition (VECC) INTERROGATORY #81**

**Issue 6.6**      **Is the load forecast a reasonable reflection of the energy and demand requirements of the applicant? Is the forecast of other rates and charges appropriate? Is the forecast of other revenues appropriate?**

**Interrogatory**

**Reference:**    **A/T16/S2, pg. 14-15 and Appendix E (Updated)**

- a) For which years were actual loads available and used in the development of the updated load forecast? If 2013 loads were not available to be used, please explain why.
- b) Please confirm that Table E.5 is based on wholesale loads whereas Tables E.6 through E.9 are end-use values.
- c) In Table E.5 the 2013 values appear to be actual values (i.e. actual/forecast and normalized are different). However, in Tables E.6 and E.7 the 2013 values appear to be based on forecast (i.e. the actual/forecast and weather normalized values are the same). Please confirm if this is the case and, if so, explain why.
- d) Please provide a schedule that set outs the actual weather corrected total Retail load for each year from 2004 up to the most recent year as used for purposes of developing the load forecast, the annual CDM added back in for each of the historical values and the resulting total (per page 14 – Figure 2).
- e) Please indicate where the actual CDM adjustments used in response to part (d) are found/reported in A/T16/S3.

**Response**

- a) 2013 and all prior years were actual loads at the wholesale purchase level (Table E.5). 2013 sales (Table E.6 to E.8) by rate class were not available at the time when the forecast was prepared due to customer billing issues, so forecast was developed.
- b) This is to confirm that Table E.5 is at wholesale purchase level whereas Tables E.6 through E.9 are values at the end-use level.
- c) Please see responses to (a) and (b) above.

d) The requested information is provided below.

**Actual Weather Corrected Retail Load**  
**(GWh)**

Year	After CDM Deduction	CDM	Before CDM Deduction
2004	26,723	0	26,723
2005	26,132	0	26,132
2006	26,076	303	26,379
2007	25,872	662	26,534
2008	25,532	758	26,290
2009	24,616	927	25,543
2010	24,573	1,317	25,890
2011	24,923	1,595	26,518
2012	24,610	1,649	26,259
2013	24,698	1,705	26,403

e) The CDM adjustment presented at the wholesale level in response to Exhibit I, Tab, Schedule 6 VECC-81 (d) is consistent with the values presented at the end-use level in Exhibit A, Tab 16, Schedule 3, page 4, Table 1.

**Vulnerable Energy Consumers Coalition (VECC) INTERROGATORY #82**

**Issue 6.6**      **Is the load forecast a reasonable reflection of the energy and demand requirements of the applicant? Is the forecast of other rates and charges appropriate? Is the forecast of other revenues appropriate?**

**Interrogatory**

**Reference:**    **A/T16/S2, pg. 17-19 and Appendices A, B, C & E (Updated)**



- a) Please provide the forecast of total annual Retail energy for each year 2014-2019 inclusive based on the Monthly Econometric Model (per Appendix A) before any adjustments for CDM.
- b) Please provide the forecast of total annual Retail energy for each year 2014-2019 inclusive based on the Annual Econometric Model (per Appendix B) before any adjustments for CDM.
- c) Please provide the forecast of total annual Retail energy for each year 2014-2019 inclusive based on the End-Use Model (per Appendix C) before any adjustments for CDM.
- d) Please provide additional details as to how the results of the three models are combined to establish the overall Retail load forecast prior to accounting for CDM. As an illustration, please provide the detailed calculations for 2015.
- e) Please details as to how the overall Retail class forecast is broken down in order to establish the load forecast by customer class prior to the CDM adjustment. As an illustration, please provide the detailed calculations for 2015.
- f) For Table E.7, please confirm that kWh values reported are after the adjustment for CDM?
- g) Please confirm that the forecast adjustment for CDM is performed on a customer class basis using the values per Table E.9.
- h) Please reconcile the 2013 CDM results for Retail Customers reported in Table E.9 (1,339-154=1,185 GWh) with the value reported in A/T16/S3, Table 1 (1,592.5 GWh).

**Response**

a), b) and c)

The requested information is provided in Tables 1 and 2, expressed in annual growth rate (%) and in GWh respectively.

**Table 1**  
**Forecast of Wholesale Retail Load**  
**(%)**

Year	Annual Econometrics	Monthly Econometrics	Annual End-Use	Final Forecast
2014	0.3	0.1	-1.2	0.1
2015	0.4	0.3	0.1	0.6
2016	0.4	n.a	0.4	0.8
2017	0.4	n.a	-0.4	0.8
2018	0.6	n.a	1.5	1.1
2019	0.8	n.a	2.6	1.1
Sum of Annual Growth Rates				
2014-2019	2.9	0.3	3.0	4.5
2015-2019	2.6	0.3 	4.2 	4.3

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**Table 2**  
**Forecast of Wholesale Retail Load**  
**(GWh)**

Year	Annual Econometrics	Monthly Econometrics	Annual End-Use	Final Forecast
2013	21,723	21,723	21,723	21,723
2014	21,784	21,737	21,459	21,749
2015	21,867	21,795	21,480	21,871
2016	21,952	n.a	21,558	22,046
2017	22,045	n.a	21,481	22,224
2018	22,177	n.a	21,797	22,471
2019	22,350	n.a	22,370	22,708

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All figures are weather-normal at the wholesale level before CDM deductions

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d) The forecasts were combined in the following manner. For the short term forecast (2014), the monthly model was given the greatest weight. This monthly model is good for short-term forecasting for up to 2 years and, as such, is not used for forecasting beyond 2015. The longer term forecast (2015-2019) was tuned to the end-use forecast, while the annual pattern was tuned to the annual econometric forecast. Table 2 above shows the final forecast for 2015 after tuning.

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e) Please see the response to Exhibit I, Tab 6.6, Schedule 6 VECC 79 (a) for details. For residential customers, the forecast takes into account changes in number of customers as linked to changes in number of households and associated forecast of housing starts for Ontario. Other factors affecting load include the dynamics of electricity usage over time and the impact of CDM. Please see Table 3 using 2015 as an illustration. For 2015, another factor is the change in rate class classification compared to 2014.

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**Table 3**  
**Load Forecast Calculation for the Year 2015**  
**(GWh)**

Rate Class	2014 Load (1)	Change Due to Number of Customers (2)	Change Due to Usage (3)	Impact of CDM (4)	Total Change (5)	2014 Load + Total Change = 2015 Load (6)
Dgen	19	7.1	-4.7	0.0	2.4	21
GSd	2,777	-261.4	-150.2	39.0	-372.5	2,404
GSe	2,382	-127.2	-79.2	19.1	-187.3	2,195
R1	4,574	253.1	261.8	-36.3	478.6	5,052
R2	5,592	-614.3	-62.5	18.4	-658.5	4,933
Seasonal	668	-43.5	-160.2	9.4	-194.3	474
ST	16,532	95.9	5.4	-73.3	27.9	16,560
UGd	648	388.4	71.1	-40.1	419.5	1,068
UGe	396	174.1	53.8	-20.0	208.0	604
UR	1,621	355.1	50.3	-24.9	380.5	2,001
STL	123	0.9	-0.8	0.0	0.1	124
SEN	22	-0.2	0.2	0.0	0.0	22
USL	23	0.1	0.5	0.0	0.6	24
Total	35,378	266.5	-53.0	-108.5	105.0	35,483

Notes:

(1) From Table E.7.

(2) This is calculated by increasing the load in proportion to number of customers, provided in Table E.5.

(3) This reflects change in usage due to economic conditions (specially for industrial and commercial customers as well as change in demographic, size of house, technology etc. (specially for residential customers).

(4) From Corrected Table E.9 provided in VECC-80 (d) except for the ST class, CDM for all ST customers (retail +embedded) net of distribution losses is presented for the ST rate class.

(5) Calculated as change due to number of customers and usage plus the CDM impact.

(6) Same numbers as in Table E.7 for the year 2015.

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f) This is to confirm that the kWh values reported in Table E.7 are after the adjustment for CDM.

- 1 g) This is to confirm that forecast adjustment for CDM on a customer class basis is  
2 calculated using the values per corrected Table E.9 provided in Exhibit I, Tab 6.6,  
3 Schedule 6, VECC 80 (d), except for the ST class. The load reported for ST class in  
4 Table E.7 includes all ST customers (i.e., directs + LDCs) and, as such, was adjusted  
5 using total ST CDM net of distribution losses (the latter figures before deducting  
6 distribution losses are provided in Exhibit A, Tab 16, Schedule 2, Table 6 at the  
7 wholesale level). The ST values in revised Table E.9 are for ST directs only.  
8
- 9 h) The values in Table E.9 are incorrect. Corrected values are given in the response to  
10 Exhibit I, Tab 6.6, Schedule 6, VECC 80 (d). The total CDM impact in 2013 is  
11 1,592.5 GWh in both Table 1 (Exhibit A, Tab 16, Schedule 3) and the corrected Table  
12 E.9

**Vulnerable Energy Consumers Coalition (VECC) INTERROGATORY #83**

**Issue 6.6**      **Is the load forecast a reasonable reflection of the energy and demand requirements of the applicant? Is the forecast of other rates and charges appropriate? Is the forecast of other revenues appropriate?**

**Interrogatory**

**Reference:**    **A/T16/S2, pg. 14-15; pg. 19-20 and pg. 24**

- a) Please provide the econometric models used to forecast embedded utilities and embedded industrial/commercial load included in the ST class.
- b) Please provide the annual forecast for 2015-2019 inclusive for these embedded utilities and embedded industrial/commercial customers based on the econometric models prior to any adjustments for CDM.
- c) For each of these customer segments please indicate the adjustments that were made, based on the results from the customer survey, in order to arrive at the forecast included in the Updated Application prior to CDM (per page 24).
- d) How does Hydro One Networks ensure that the customer survey results do not include the effects of future CDM initiatives by these customers?



**Response**

a) The econometric model for embedded LDC customers is provided below.

$$\begin{aligned} \text{LEMBLDCS} = & C(1) + C(2) * D(\text{LHHOLD}) + C(3) * (\text{LPELRES}(-1) \\ & - \text{LPGASRES}(-1)) + C(4) * \text{LCDD} + C(5) * \text{LHDD} + C(6) * \text{LEMBLDCS}(-1) \\ & - C(4) * C(6) * \text{LCDD}(-1) - C(5) * C(6) * \text{LHDD}(-1) + C(7) * \text{TR} + C(8) * \text{LHHOLD} \end{aligned}$$

Where

LEMBLDCS = logarithm of embedded LDC customers load,  
LHHOLD = logarithm of number of households in Ontario,  
D(LHHOLD) = LHHOLD – (LHHOLD lagged one year),  
LPELRES = logarithm of electricity price for Ontario residential sector,  
LPGASRES = logarithm of natural gas price for Ontario residential sector,  
LHDD = logarithm of heating degree days for Pearson International Airport,  
LCDD = logarithm of cooling degree days for Pearson International Airport,  
TR = a dummy variable to account for a shift in growth pattern of load,  
increases by 1 per year prior to 1989 and no increase afterwards,

The estimated coefficients and associated statistics are presented below.

	<u>Estimated Coefficient</u>	<u>Standard Error</u>	<u>t-ratio</u>
C(1)	1.675333	0.680633	2.461433
C(2)	1.729053	1.076559	1.606092
C(3)	-0.006463	0.014141	-0.457013
C(4)	0.011330	0.009644	1.174759
C(5)	0.006013	0.059647	0.100814
C(6)	0.780750	0.116888	6.679494
C(7)	0.009051	0.004344	2.083463
C(8)	0.013392	0.099033	0.135229

R-squared=0.984, Adjusted R-squared=0.980, Durbin-Watson Statistic = 1.81.

As explained in Exhibit A, Tab 16, Sch. 2 page 20, econometric analysis was not used for large industrial/commercial customers. For these customers, several information sources were used to prepare the forecast, including customer load profile, industry

monitoring, customer survey, information through account executives, and production and industry forecasts.

b) c)


Forecasts from the econometric model and customer survey are presented in the following table. The forecast was basically tuned to customer forecast.

**Comparison of LDC Econometric Forecast and Customer Survey**  
**(GWh)**

Year	Econometric Model	Customer Survey	May-14 Updated Forecast
2014	0.31	0.67	0.51
2015	0.35	0.53	0.66
2016	0.45	0.62	0.66
2017	0.40	0.83	0.65
2018	0.22	0.83	0.95
2019	0.10	0.84	0.89
Sum of Annual Growth Rates			
2014-2019	1.84	4.32	4.33
2015-2019	1.52	3.65	3.81

Forecast for industrial and commercial customers was based on various considerations noted in (a) including customer survey. A comparison is provided below between customer survey and other considerations..

**Comparison of Forecasts for Industrial and Commercial Customers**  
**(GWh)**

Year	Other Considerations	Customer Survey	May-14 Updated Forecast
2014	1.13	0.55	1.30
2015	0.27	0.24	0.31
2016	0.26	0.39	0.30
2017	0.29	0.53	0.34
2018	0.58	0.53	0.67
2019	0.54	0.54	0.62
Sum of Annual Growth Rates			
2014-2019	3.07	2.77	3.53
2015-2019	1.94 	2.22	2.23

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- d) The survey results were presented at the gross load level (i.e., before CDM reductions). Customers were asked to identify the timing and magnitude for any significant load and generation changes and no change due to CDM was identified.

**Vulnerable Energy Consumers Coalition (VECC) INTERROGATORY #84**

**Issue 6.6**      **Is the load forecast a reasonable reflection of the energy and demand requirements of the applicant? Is the forecast of other rates and charges appropriate? Is the forecast of other revenues appropriate?**

**Interrogatory**

**Reference:**    A/T16/S2, pg. 21-22 and pg. 46-48

- a) For which rate classes was hourly data not available for all customers (page 21, lines 12-13)? In each of these, what percentage of the actual 2012 load was hourly data available for purposes of scaling?
- b) Please clarify what is meant by a “customer delivery point” (page 21, lines 20-25).
- c) Are the kW values shown in Tables E.8 a) and E.8 b) before or after the adjustment for CDM (i.e. have historical actual values been increased for CDM and have the forecast values been adjusted downwards for CDM)?
- d) For those customer classes that are demand billed please provide a schedule that calculates the (billing) load factor for each customer class (i.e. average monthly kWh/average monthly billing kW delivered) for each historic year 2008-2013 using the weather normalized values.
- e) For those classes that are demand billed how were the forecast billing kW for 2015-2019 derived from the forecast kWh?
- f) For those customer classes that are demand billed please provide a schedule that sets out the annual forecast kWh and billing kW for each class for 2015-2019. Using this data please calculate the (billing) load factor for each customer class (i.e. average monthly kWh/average monthly billing kW delivered) for each of the years 2015-2019.

**Response**

- a) This includes all rate classes since in each rate class there were some customers who did not have a smart meter. The percentage of customer loads with hourly data in 2012 is provided below:

Rate Class	% load with hourly data
Dgen	55%
GSd	23%
GSe	61%
R1	88%
R2	81%
Seasonal	72%
ST	97%
UGd	26%
UGe	54%
UR	76%
STL	0%
SEN	0%
ALL	74%

- b) Customer delivery point is the point where a customer is connected to the distribution system (similar to the point of sale).

- c) Both historical and forecast figures in Table E.8a and Table E.8b are net of CDM impact (i.e., after deduction of CDM for the forecast period). The values presented in Exhibit A, Tab 16, Schedule 2, Table E.8a and Table E.8b are incorrect. The corrected values are provided below:

**Table E.8a**  
**Actual and**  
**Forecast for Billing Peak in kW**

Rate Class	DGEN	GSd	Ugd	ST	Total
2008	66,624	10,549,230	1,830,892	35,182,285	47,629,031
2009	67,788	10,542,400	1,943,057	35,980,901	48,534,146
2010	59,361	10,288,535	1,981,526	36,362,897	48,692,319
2011	68,282	10,331,311	1,964,583	35,730,299	48,094,476
2012	81,512	10,050,244	1,912,569	36,409,471	48,453,796
2013	157,942	9,807,861	1,862,275	35,229,815	47,057,892
2014	192,622	9,849,440	1,866,224	35,656,983	47,565,268
2015	216,099	8,484,670	3,058,267	35,979,010	47,738,046
2016	232,370	8,493,971	3,045,878	35,937,113	47,709,332
2017	240,223	8,541,960	3,048,496	36,051,950	47,882,630
2018	248,297	8,499,358	3,019,175	35,823,052	47,589,882
2019	256,373	8,443,180	2,984,482	35,539,737	47,223,772

**Table E.8b**  
**Weather Corrected Actual**  
**and Forecast for Billing Peak in kW**

Rate Class	DGEN	GSd	Ugd	ST	Total
2008	66,342	10,504,548	1,823,137	34,744,764	47,138,791
2009	69,646	10,831,349	1,996,313	36,882,262	49,779,570
2010	56,860	9,854,946	1,898,019	34,830,459	46,640,284
2011	66,297	10,030,850	1,907,448	34,691,170	46,695,764
2012	80,371	9,909,510	1,885,788	35,862,030	47,737,698
2013	157,942	9,807,861	1,862,275	35,229,815	47,057,892
2014	192,622	9,849,440	1,866,224	35,656,983	47,565,268
2015	216,099	8,484,670	3,058,267	35,979,010	47,738,046
2016	232,370	8,493,971	3,045,878	35,937,113	47,709,332
2017	240,223	8,541,960	3,048,496	36,051,950	47,882,630
2018	248,297	8,499,358	3,019,175	35,823,052	47,589,882
2019	256,373	8,443,180	2,984,482	35,539,737	47,223,772

- d) The requested information is provided in the following table. The average monthly billing peak and billing kWh are calculated as the sum of the corresponding monthly values divided by the number of months that the customer received a bill.

**Weather-Normalized Billing Peak Load Factor**  
**(average monthly energy over Avearge Monthly Peak in MW)**

	2008	2009	2010	2011	2012
GSd	0.947	0.950	0.931	0.938	0.948
ST	0.979	0.976	0.957	0.964	0.975
UGd	0.923	0.949	0.931	0.938	0.948

- e) Forecast of billing peak for each rate class was produced by applying the growth rate of kWh for that rate class (as presented in Table E.7) to the corresponding billing peak in the prior year as shown in updated Table E.8a. The result for this “pro-rated forecast” is presented in Table (a) below for the years 2016-2019 that has the same rate classification in 2015. Next, dynamics of energy to peak ratio during the historical period and over the forecast period were taken into account and further adjustments were made to account for differences in the CDM impact on kWh as compared with demand. These adjustments are presented in Table (b) below.

**Table (a): Pro-rated Forecast Based on**  
**Applying kWh Growth to Billing Peak in Prior Year**  
**(kW)**

Rate Class	2,016	2,017	2,018	2,019
Dgen	235,406	241,891	249,834	257,239
GSd	8,604,926	8,601,286	8,551,956	8,471,700
ST	36,128,405	36,156,941	36,023,859	35,649,628
UGd	3,085,666	3,069,669	3,037,859	2,994,564

**Table (b): Adjustments to Forecast to Account for Other Factors**  
**(kW)**

Rate Class	2,016	2,017	2,018	2,019
Dgen	-3,035	-1,668	-1,537	-866
GSd	-110,955	-59,326	-52,598	-28,521
ST	-191,293	-104,990	-200,807	-109,891
UGd	-39,788	-21,172	-18,684	-10,081

- f) The billing peak for each rate class was forecast at the aggregate level. Hydro One does not have a forecast on individual customer billing peak and kWh to divide them by expected number of months that the customer would receive a bill. An alternative comparison of load factor during historical and forecast period is provided in the following two tables. For the Dgen rate class, historical figures were not available so they are not presented.

**Historical Load Factor**

**(Annual kWh divided by the sum of 12 monthly billing peak )**

Rate Class	2008	2009	2010	2011	2012
GSd	337	282	282	299	294
ST	469	438	447	454	459
UGd	407	338	345	345	347

**Forecast Load Factor**

**(Annual kWh divided by the sum of 12 monthly billing peak )**

Rate Class	2015	2016	2017	2018	2019
Dgen	106	107	108	109	109
GSd	307	311	313	315	316
ST	476	478	480	483	484
UGd	378	383	386	388	389



**Vulnerable Energy Consumers Coalition (VECC) INTERROGATORY #85**

**Issue 6.6**      **Is the load forecast a reasonable reflection of the energy and demand requirements of the applicant? Is the forecast of other rates and charges appropriate? Is the forecast of other revenues appropriate?**

**Interrogatory**

**Reference:**    **A/T16/S2, pg. 40-41**  
                     **A/T16/S1, pg. 2-4**

- a) Why is the Consensus Forecast used for GDP and Housing Starts but the Global Insight forecast is used for Distribution Cost Escalation; CPI and Exchange rates?
- b) What is the source of the GDP, Population and Housing forecasts set out in Table E.3?

**Response**

- a) Consensus forecast is developed for GDP and housing starts because they are the key variables used in the load forecasting model. For Cost Escalation, Global Insight is the source that is used by most utilities in North America.
- b) For GDP and housing forecast growth rates, the consensus forecast was used. For population, the forecast is based on average growth rates provided by Global Insight and C4SE. As for the actual figures, GDP is from Ministry of Finance, housing from Global Insight, and population from Statistics Canada.

**Vulnerable Energy Consumers Coalition (VECC) INTERROGATORY #86**

**Issue 6.6**      **Is the load forecast a reasonable reflection of the energy and demand requirements of the applicant? Is the forecast of other rates and charges appropriate? Is the forecast of other revenues appropriate?**

**Interrogatory**

**Reference:**    **A/T16/S3, pg. 4**  
                     **A/T16/S4, pg. 5**  
                     **A/T16/S2, pg. 12 and 49**

- a) Does Table ES 1 (A/T16/S4) include just Hydro One Networks' Retail Customers or also its ST Customers?
- b) If Table ES 1 does not include ST customers, how were the forecast CDM savings attributable to this class (per A/T16/S2, pg. 12 and 49) established?
- c) Please explain why the Hydro One CDM savings reported in Table 3 (A/T16/S2, pg. 12) for 2014-2019 differ for those reported in Table ES 1 (A/T16/S4, pg. 5). Please provide a schedule that reconciles the two.
- d) Please explain why the Hydro One CDM savings reported in Table 3 (A/T16/S2, pg. 12) for 2013-2019 differ for those reported in Table E.9 (A/T16/S2, pg. 49). Please provide a schedule that reconciles the two. In particular, please reconcile the material difference between the two in terms of the CDM for the ST Class.
- e) Are the totals reported in Table 1 (A/T16/S3, pg. 4) consistent (in terms of definition) with the totals reported for Table ES 1 (A/T16/S4, pg. 5)? If not, what is the difference?
- f) How do the CDM categories used in Table 1 (A/16/3, pg. 4) relate to the CDM categories used for Table ES 1 (A/16/4, pg. 5)? Please provide a schedule that reconciles the two.

**Response**

- a) Table ES 1 (Exhibit A, Tab 16, Schedule 4) includes Hydro One Network's Retail Customers and Retail ST Customers (Directs).
- b) Table ES 1 includes Retail ST Customers.
- c) The Total CDM Energy Savings from Table ES 1 (Exhibit A, Tab 16, Schedule 4) are at end-use level and are equivalent to the wholesale values for retail customers plus ST Direct Customers reported in Table 3 (Exhibit A, Tab 16, Schedule 2) multiplied by the appropriate loss factors.

	2014	2015	2016	2017	2018	2019
Retail CDM Impact at Wholesale Level (A/16/2/Table 3)	1,336	1374	1417	1416	1646	1949
ST Direct CDM Impact at Wholesale Level (A/16/2/Table 3)	426	427	429	420	454	505
Retail loss factor	1.083	1.083	1.083	1.083	1.083	1.083
ST Direct loss factor	1.034	1.034	1.034	1.034	1.034	1.034
Total CDM at End-Use Level (A/16/4/Table ES 1)	1645	1681	1723	1714	1958	2288

- d) Please see Exhibit I, Tab 6.6, Schedule 6 VECC 80 part (d).
- e) The totals reported in Table 1 (Exhibit A, Tab 16, Schedule 3) and the totals reported in Table ES 1 (Exhibit A, Tab 16, Schedule 4) are both at end-use level.
- f) The requested information is provided below

Categories in Table 1 (Exhibit A, Tab 16, Schedule 3)	Categories in Table ES 1 (Exhibit A, Tab 16, Schedule 4)
Non-Target Programs (2005-2010)	Historical Program Persistence (2006-2010)
Target Programs (2011-2012)	Target Program Persistence (2011- 2012)
N/A	Target Program Persistence (2013-2014)
Other Organizations	Forecasted Savings from Future Programs
Codes & Standards	Codes & Standards
Increased Conservation Effect	N/A

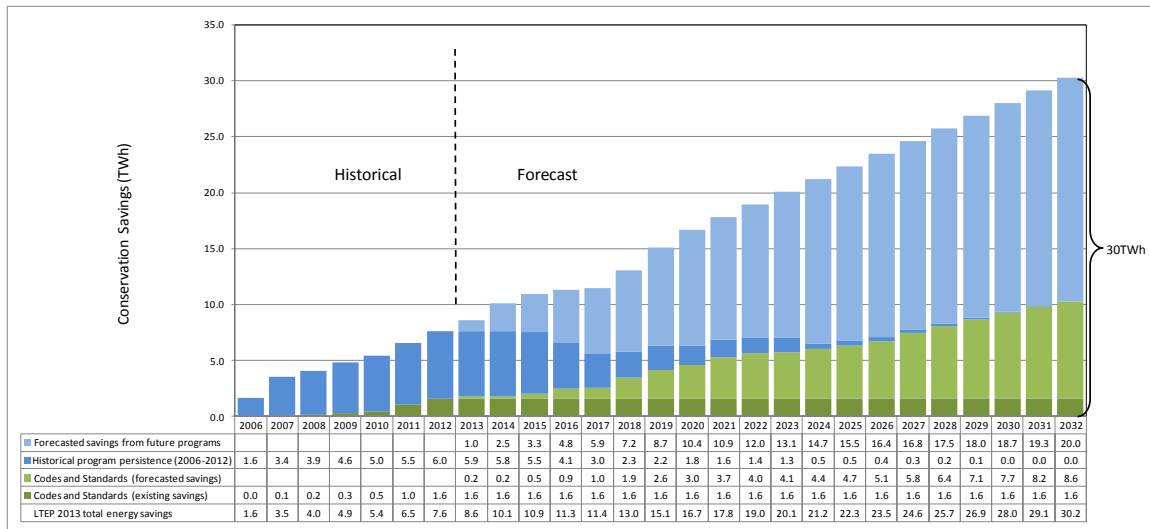
**Vulnerable Energy Consumers Coalition (VECC) INTERROGATORY #87**

**Issue 6.6** Is the load forecast a reasonable reflection of the energy and demand requirements of the applicant? Is the forecast of other rates and charges appropriate? Is the forecast of other revenues appropriate?

**Interrogatory**

**Reference:** A/T16/S4, pg. 4-5  
2013 LTEP, Module 2, Slide 10

**Preamble:** The detail LTEP Information Breakdown provided by the OPA (<http://powerauthority.on.ca/sites/default/files/planning/LTEP-2013-Module-2-Conservation.pdf>) includes the following data regarding forecast conservation savings.



- How do the CDM categories used by Hydro One Networks in Table ES 1 relate to the OPA's CDM categories as used in the 2013 LTEP?
- Please re-state Hydro One Networks' forecast 2014-2019 CDM savings using the OPA's CDM categories.
- Please provide a schedule that sets out the savings expected in each of the years 2014-2019 from Target Programs offered in 2011-2014 showing the impact of each year's programs separately.
- Using 2015 as an example, please detail how the Hydro One Networks' forecast

- 1 CDM savings due to Codes and Standards was derived and broken down by  
2 customer class.
- 3 e) Using 2015 as an example, please detail how Hydro One Networks' forecast  
4 CDM savings attributed to "Forecast Savings from Future Programs" was derived  
5 and broken down by customer class.
- 6 f) How did Hydro One Networks ensure there was no double counting as between  
7 its categories for "Target Program Persistence (2011-2014)" and "Forecast  
8 Savings from Future Programs" (per Table ES 1) given that the 2013 LTEP's  
9 definition of "future programs" includes savings for 2013 and 2014 programs?

10  
11  
12 **Response**  
13

- 14 a) The relationship of CDM categories between OPA and HONI is as follows:  
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OPA's Categories		HONI's Categories
<ul style="list-style-type: none"> <li>- Historical programs (2006-2012)</li> <li>- Future programs</li> </ul>	<b>Program</b>	<ul style="list-style-type: none"> <li>- Historical programs (2006-2010)</li> <li>- Target programs (2011-2014)</li> <li>- Future programs (2015-2019)</li> </ul>
<ul style="list-style-type: none"> <li>- Codes &amp; Standards (existing savings)</li> <li>- Codes &amp; Standards (forecasted savings)</li> </ul>	<b>Codes &amp; Standards</b>	<ul style="list-style-type: none"> <li>- Codes &amp; Standards (existing and forecasted savings)</li> </ul>

- 16  
17  
18 b) Hydro One could not re-state the forecast 2014-2019 CDM savings using the  
19 OPA's CDM categories. Hydro one uses slightly different CDM categories from  
20 the OPA. For the historical programs, Hydro One has two categories: historical  
21 programs (2006-2010) and target programs (2011-2014). For the forecast period,  
22 Hydro One estimated CDM savings for the year of 2015-2019. OPA's historical  
23 programs savings cover the period of 2006-2012 and future program savings  
24 pertain to conservation after 2013.  
25

c) The requested information is provided below:

Program Implementation Year	Annualized CDM Energy Savings (GWh)					
	2014	2015	2016	2017	2018	2019
2011	86	78	74	70	65	64
2012	59	58	53	50	48	44
2013	83	83	83	76	71	68
2014	252	250	250	249	227	212
Total	480	470	459	446	410	387

d) A step-by-step description of how Hydro One forecasts CDM savings due to Codes and Standards is provided in detail below.

Step 1: Estimate savings attributed to codes and standards by sector.

ICF Marbek conducted a “conservation achievable potential” study for the OPA to assist in the development of 2013 Long-Term Energy Plan (LTEP). Hydro One requested ICF Marbek to create a custom tailored dataset from the provincial study to estimate the conservation potential by sector and end use within Hydro One service territory. This analysis included details on the achievable potential in each of the residential, commercial and industrial sectors. The study covers a 20-year period with a base year of 2012 and milestone periods at five-year increments. The following table presents the Hydro One’s savings attributed to codes and standards by sector.

Sector	2012	2017	2022	2027
Residential	3	113	546	745
Commercial	266	304	422	518
Industrial				
Total in GWh	269	417	968	1263

Step 2: Derive annual CDM saving by sector based on the average annual growth rate.

Sector	2012	2013	2014	2015	2016	2017	2018	2019
Residential	3	25	47	69	91	113	200	286
Commercial	266	274	281	289	296	304	328	351
Industrial								
Total	269	299	328	358	387	417	527	637

Step 3: Allocate monthly CDM savings by customer rate class.

Based on the customer billing data, Hydro One calculated the share of energy consumption within the residential and non-residential (commercial and industrial) sectors. The energy savings are then assigned to each rate class using the energy shares.

Sector	Rate class
Residential	R1
	R2
	UR
	Seasonal
Non-Residential (Commercial+Industrial)	GSE
	UGE
	GSD
	UGD
	ST

e) The table below provides the detailed calculation to determine the savings attributed to “forecasted savings from future programs” for Hydro One in 2015.

Formula	Items	2015(in GWh)		Note
(1)	LTEP 2013 Total energy saving	10,900		From OPA's LTEP 2013
(2)	Excluding saving from TX direct customers (at generation level)	953		assumption from OPA
(3)=((1)-(2))/distribution Loss factor	Total savings from all LDCs (at end use level)**	9,339		OPA's average loss factor for distribution customers is 0.065 in 2015
(4)=18%*(3)	HONI's Total energy savings (18% of all LDCs)	1,681		
(5)	HONI's saving from Non_Target Programs 2005-2010	335		based on the program evaluation
(6)	HONI's saving from Target programs 2011-2014	475		based on the program evaluation
(7)	HONI's saving from codes and standards	358		estimation of H1's share
(8)=(4)-(5)-(6)-(7)	HONI's saving from other programs/ future programs (OPFP)	514		
(9)	HONI's saving in GWh from OPFP by sector	Residential	248	based on the saving % by sector from ICF study for HONI
		Commercial	219	
		Industrial	47	
(10)	HONI's saving in GWh from OPFP by rate class	Res- R1, R2, UR, Seasonal		allocate saving by rate class based on the energy % in 2012
		Com+Ind- GSE, UGE, GSD, UGD, ST		

*\*\* The forecasted savings from future programs includes the persistence impacts from other influence during 2006-2014 and any other new programs starting in 2015*

f) Hydro One used different categories for CDM program savings from OPA’s LTEP 2013. Program categories include historical programs (2006-2010), target programs (2011-2014) and future programs (2015-2019). There is no double counting of savings for 2013 and 2014 using these categories.



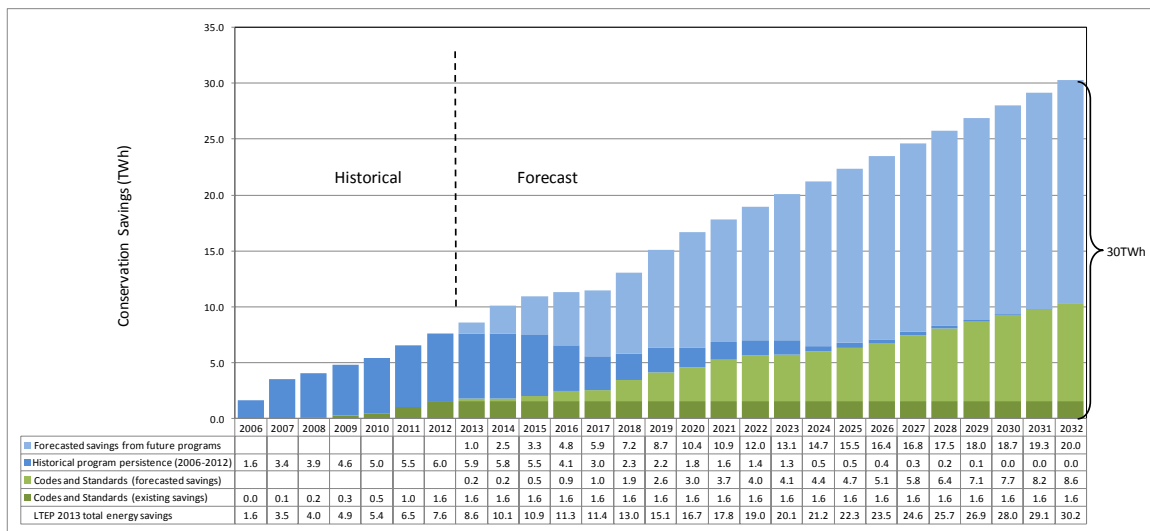
**Vulnerable Energy Consumers Coalition (VECC) INTERROGATORY #88**

**Issue 6.6** Is the load forecast a reasonable reflection of the energy and demand requirements of the applicant? Is the forecast of other rates and charges appropriate? Is the forecast of other revenues appropriate?

**Interrogatory**

**Reference:** A/T16/S4, pg. 4-5  
2013 LTEP, Module 2, Slide 10  
A/T16/S3, pg. 4

**Preamble:** The detail LTEP Information Breakdown provided by the OPA (<http://powerauthority.on.ca/sites/default/files/planning/LTEP-2013-Module-2-Conservation.pdf>) includes the following data regarding forecast conservation savings.



- Please restate the Hydro One Networks' historic CDM savings as set out in Table 1 (A/T16/S3, pg. 4) using the 2013 LTEP CDM categories.
- Please restate the Hydro One Networks' historic CDM savings as set out in Table 1 (A/T16/S3, pg. 4) using the Hydro One Networks' CDM categories as per Table ES 1 (A/T16/S4,pg. 5)

**Response**

a) Hydro One could not restate its historical savings using the OPA's 2013 LTEP CDM categories because the grouping of the savings is different and currently detailed information is not available to prepare this analysis. In the above table, four categories are used: Codes & Standards savings for 2013-2032, Codes and Standards savings for 2006-2012, historical program persistence savings for 2006-2012 and forecasted program savings for 2013-2032.

Table 1 in Exhibit A, Tab 16, Schedule 3 summarizes the CDM impact achieved by HONI for the years 2005 to 2013. For the CDM categories used in this analysis, Hydro One has adopted CDM categories consistent with the 2010 LTEP, including Codes & Standards, Other influences and programs (non-target programs and target programs). In addition, Hydro One has identified savings attributed to increased conservation effect (ICE) based on the top-down econometric analysis and bottom-up customer billing consumption analysis.

b) The requested information is provided below:

	2006	2007	2008	2009	2010	2011	2012	2013
Codes and Standards	-	9	19	32	52	140	269	299
Historical program persistence (2006-2010)	79	225	331	400	445	432	401	388
Target program persistence (2011-2014)	-	-	-	-	-	44	116	187
Forecasted savings from future programs	203	384	355	432	733	873	754	719
Total	282	617	706	865	1,229	1,488	1,540	1,593

**Vulnerable Energy Consumers Coalition (VECC) INTERROGATORY #89**

**Issue 6.6**      **Is the load forecast a reasonable reflection of the energy and demand requirements of the applicant? Is the forecast of other rates and charges appropriate? Is the forecast of other revenues appropriate?**

**Interrogatory**

**Reference:**    A/T16/S2, pg. 24, Table 6  
                      A/T16/S2, pg. 49, Table E.7 and E.9  
                      A/T16/S4, pg. 5, Table ES1

- a) Please provide a schedule that reconciles the CDM impact values reported Table E.9 with those reported in Table ES 1 for each of the years 2013 to 2019. If losses are part of the reconciliation, please indicate the loss factor assumed and the basis for the assumption.
- b) Please provide a schedule that reconciles the load forecast (after the CDM adjustment) as reported in Table 6 and Table E.7.
- c) Overall, please indicate where in the Application or the preceding interrogatory responses the determination of the forecast CDM savings set out in Table 6 are set out. Otherwise, please provide a clear explanation as to the basis for the values in Table 6.

**Response**

- a) The values in Table E.9 are incorrect. Corrected values are given in Exhibit I, Tab 6.6, Schedule 6 VECC 80. The totals in the corrected table are equivalent to the total values in Table ES 1 (Exhibit A, Tab 16, Schedule 4).
- b) The load forecast presented in Table 6 (Exhibit A, Tab 16, Schedule 2) is at wholesale purchase level and the load forecast in Table E.7 (Exhibit A, Tab 16, Schedule 2) is at sales level. The following table provides the load forecast by rate class at wholesale purchase level to reconcile the numbers between Table 6 and Table E.7.

Rate Class	2013	2014	2015	2016	2017	2018	2019
Dgen	16	20	22	24	25	26	27
GSd	2,945	2,945	2,551	2,588	2,620	2,624	2,615
GSe	2,622	2,601	2,397	2,410	2,421	2,402	2,373
R1	4,929	4,962	5,483	5,545	5,626	5,675	5,704
R2	6,145	6,105	5,389	5,378	5,389	5,366	5,322
Seasonal	738	730	518	515	517	516	513
ST	17,073	17,095	17,123	17,194	17,300	17,286	17,203
UGd	689	688	1,133	1,143	1,152	1,148	1,139
UGe	434	432	660	665	670	667	661
UR	1,738	1,747	2,158	2,174	2,199	2,211	2,214
STL	133	135	135	136	137	137	138
SEN	24	24	24	24	24	24	24
USL	25	26	26	27	28	28	28
Total	37,512	37,508	37,620	37,824	38,108	38,111	37,961

c) The load impact of CDM in Table 6 is sub-divided into Retail Customers and Embedded Customers. The savings for Embedded Customers are further sub-divided in Table 3 (Exhibit A, Tab 16, Schedule 2) into Direct ST customers and embedded LDC customers. The CDM savings for Retail customers and Direct ST Customers are outlined in Exhibit A, Tab 16, Schedule 4 and summarized in Table ES1 (at the end-use level). The CDM savings for embedded LDCs are estimated based on their share of provincial energy applied to the total provincial CDM savings forecasted by the OPA.

**Vulnerable Energy Consumers Coalition (VECC) INTERROGATORY #90**

**Issue 6.6**      **Is the load forecast a reasonable reflection of the energy and demand requirements of the applicant? Is the forecast of other rates and charges appropriate? Is the forecast of other revenues appropriate?**

**Interrogatory**

**Reference:    E1/T1/S2**

- a) Please provide completed versions of Appendix 2-H (Other Operating Revenues) for the years 2010-2019 inclusive.
- b) Why are there no forecast external revenues attributed to Account 4405 (Interest and Dividend Income)?
- c) What were the Account 4405 annual revenues for the years 2010-2013 inclusive?

**Response**

- a) Please refer to Exhibit E2, Tab 1, Schedule 3 for the requested information.
- b) Hydro One Distribution does not earn any dividend income. Any interest it may earn on short-term cash/investment balances are offset by interest expense on debt. For business planning purposes, cash balances are assumed to be zero because all cash is to be applied to work programs to reduce the borrowing requirement. For these reasons, Hydro One Distribution does not anticipate earning income related to dividends or interest in the test years.
- c) Hydro One Distribution did not earn any dividend income in the 2010-2013 period. Any interest on short-term cash/investment balances was offset by interest expense on debt.

**Vulnerable Energy Consumers Coalition (VECC) INTERROGATORY #91**

**Issue 6.6**      **Is the load forecast a reasonable reflection of the energy and demand requirements of the applicant? Is the forecast of other rates and charges appropriate? Is the forecast of other revenues appropriate?**

**Interrogatory**

**Reference:**    **E1/T1/S2, pg. 4-5**

a) Please reconcile the sentinel light volumes reported in Table 4 with the number of sentinel light customers reported in Exhibit G1/T4/S2 (Attachments 1-4) for the years 2015-2019.

**Response**

a) The forecast shown in Table 4 was prepared by finance staff for business planning purposes. This was done on a different basis than the detailed methodology used to prepare forecasts for the purpose of rate setting as described in Exhibit A/T16/S2. Based on the forecast number of sentinel lights used for rate setting purposes, the impact on external revenues would be -\$140k (2015), -\$95k (2016), -\$49k (2017), +\$5k (2018) and +\$54k (2019).

**Vulnerable Energy Consumers Coalition (VECC) INTERROGATORY #92**

**Issue 6.6**      **Is the load forecast a reasonable reflection of the energy and demand requirements of the applicant? Is the forecast of other rates and charges appropriate? Is the forecast of other revenues appropriate?**

**Interrogatory**

**Reference:    E1/1/2, page 7**

- a) Please clarify whether the “standby administration charge” referenced on line 20 is a separate charge or the same charge as the “standby charge” referenced on line 14.
- b) What were the actual annual revenues from tingle voltage test charges and (all) standby charges for 2010 to 2013?

**Response**

- a) Both references are for the same thing.
- b) See Exhibit G2, Tab 5, Schedule 1, page 37, Rate Codes 24 and 25 for the volume of these charges in 2010 to 2013. The revenue from the Tingle Voltage Test charges equaled \$11,000 in 2010, \$8,375 in 2011, \$15,375 in 2012 and \$11,625 in 2013. The revenue from the Standby charges equaled \$0 in each year.

**Energy Probe Research Foundation (EP) INTERROGATORY #45**

**Issue 6.6**      **Is the load forecast a reasonable reflection of the energy and demand requirements of the applicant? Is the forecast of other rates and charges appropriate? Is the forecast of other revenues appropriate?**

**Interrogatory**

**Reference:**    **Exhibit A, Tab 16, Schedule 2, Page 43ff**

- a) Discuss the use of provincial growth forecast given distribution of HO customer base and relative growth Urban/Suburban and rural over the 2015-2019 period.
- b) Please provide details of the OPA forecast of sustainable CDM savings and how these are factored into the Load Forecast.
- c) What will be the Impact of the Minister's Directive for new CDM targets over the forecast period? Have these been included in the forecast or will an update be required? If so, when will this be filed?
- d) Has HO considered an Average Use Variance true up account such as the gas utilities have for the residential and small use commercial classes? Please discuss.

**Response**

- a) Provincial GDP and housing starts affect Hydro One service territory as it is part of Ontario. Due to its wide geographic coverage in the province, there are no specific economic indicators that pertain specifically to Hydro One service territory. Using the historical relationship between provincial growth and Hydro One customer base growth and the dynamics of such relationship over time is a method adopted by Hydro One to forecast its Urban/ Suburban and rural areas over the forecast period. Hydro One has used this method in the past 15 years, and based on our load forecasting experience, this method works well.
- b) Hydro One has prepared a report for the requested information. Please see Exhibit A, Tab 16, Schedule 4 for details.
- c) The new CDM target has been incorporated in the CDM forecast for 2015-2019 and no update is required.
- d) Hydro One has no plans to use the "Average Use Variance true up account".



**Energy Probe Research Foundation (EP) INTERROGATORY #46**

**Issue 6.6**      **Is the load forecast a reasonable reflection of the energy and demand requirements of the applicant? Is the forecast of other rates and charges appropriate? Is the forecast of other revenues appropriate?**

**Interrogatory**

**Reference:**    **Exhibit A, Tab 16, Schedule 2, Page 11 and  
Exhibit A, Tab 16, Schedule 3, Page 4, Table 1**

Preamble:

Table 3 (first ref) summarizes the CDM impact assumed in Hydro One's distribution system load forecast. Details of CDM forecast by rate class are provided in Appendix E, Table E.9.

- a) Please provide the Assumptions/inputs to load forecast related to
  - Provincial and HO DX Current Targets.
  - the Minister's March 2014 Directive regarding future CDM Targets (and programs).
  - Codes and Standards (Provincial and HO).
  - Natural and Customer ICE CDM.
  - Demand Reduction Programs from Demand Response (DR) Resources.
- b) Please provide a chart that shows these elements at a Provincial Level and for Hydro One.
- c) Please ensure this chart reconciles with the 2013 LTEP and provide appropriate notes.
- d) In Table 3 please provide an explanation of the large increase in GWh CDM savings forecast in 2018/2019.

**Response**

a) The requested information is provided below. For ease of reference, Table ES1 (Exhibit A, Tab 16, Schedule 4, page 5, Table ES1) and Table 2 (Exhibit A, Tab 16, Schedule 4, page 27, Table 2) are provided. Details regarding how Hydro One incorporated the CDM in the load forecast is provided in Exhibit A, Tab 16, Schedule 4.

	<b>Provincial-wide</b>	<b>Hydro One</b>
Provincial and H1 DX current target	The current provincial target for 2011-2014 is 6,000 GWh. Annual target numbers were not available	Hydro One CDM impact incorporated in the load forecast is shown in Table ES1, Item C
The Minister's March 2014 directive regarding future CDM targets (and programs)	Details of 2015-2020 provincial CDM target has not been released yet	Hydro One CDM target for 2015-2020 not yet available
Codes and Standards	Information released by the OPA is shown in Table 2, Item C and D	Assumptions used by Hydro One is shown in Table ES1, Item A
Natural and customer ICE CDM	OPA has not released the natural and customer ICE CDM	Hydro One does not consider ICE CDM in the forecast period
Demand reduction program from DR resources	Program details not yet available, but DR programs have no energy impact	DR programs have no energy impact for Hydro One

**Table ES1: Hydro One Specific CDM Energy Savings by Category (GWh)**

Item	Category	2015	2016	2017	2018	2019
A	Codes and Standards	358	387	417	527	637
B	Historical program persistence (2006-2010)	335	289	257	219	178
C	Target program persistence (2011-2014)	475	465	452	428	399
D	Forecasted savings from future programs	514	582	588	784	1,073
E	<b>Total</b>	<b>1,681</b>	<b>1,723</b>	<b>1,714</b>	<b>1,958</b>	<b>2,288</b>

Note: All savings are at end-use level

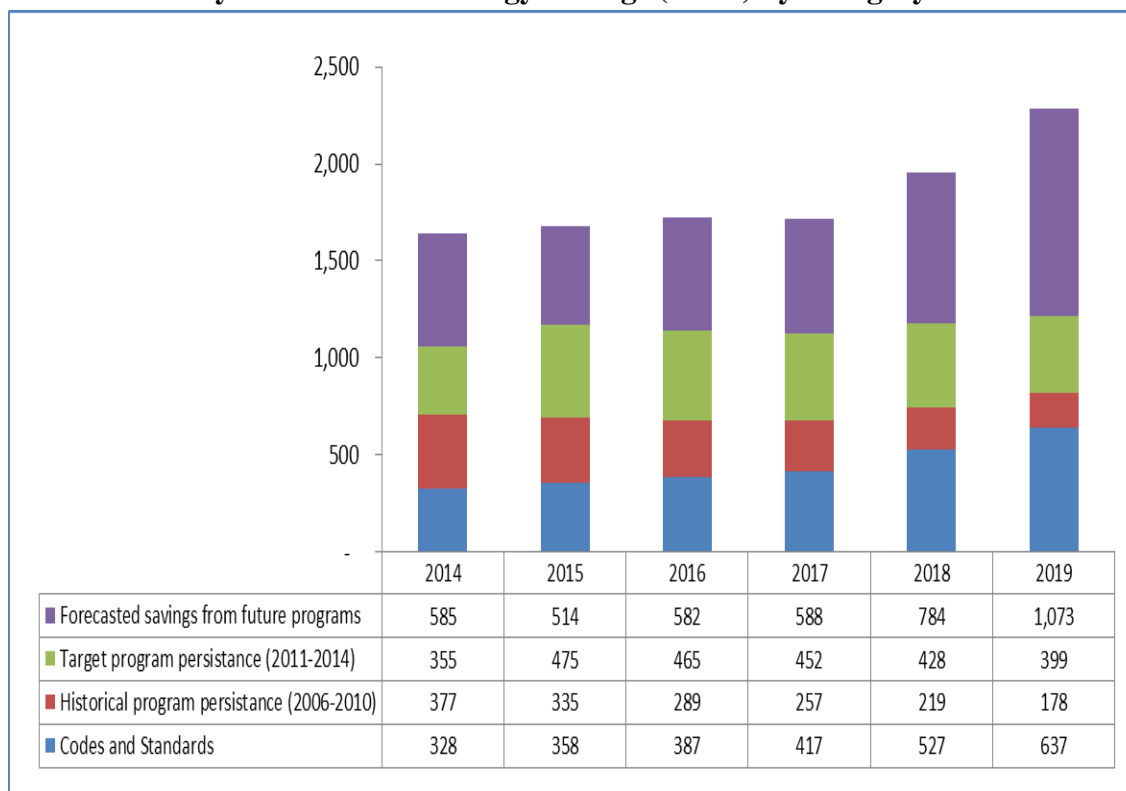
**Table 2: Province-wide CDM Energy Savings by Category (TWh)**

Item	Category	2014	2015	2016	2017	2018	2019
A	Forecasted savings from future programs	2.5	3.3	4.8	5.9	7.2	8.7
B	Historical program persistence (2006-2012)	5.8	5.5	4.1	3.0	2.3	2.2
C	Codes and Standards (forecasted savings)	0.2	0.5	0.9	1.0	1.9	2.6
D	Codes and Standards (existing savings)	1.6	1.6	1.6	1.6	1.6	1.6
E	<b>LTEP 2013 total energy savings</b>	<b>10.1</b>	<b>10.9</b>	<b>11.3</b>	<b>11.4</b>	<b>13.0</b>	<b>15.1</b>

Note: All savings are at generation level.

- b) The following two charts provide the CDM savings (GWh) by category for Hydro One and Ontario. The two charts could not be combined due to the different categories used for Hydro One and Ontario.

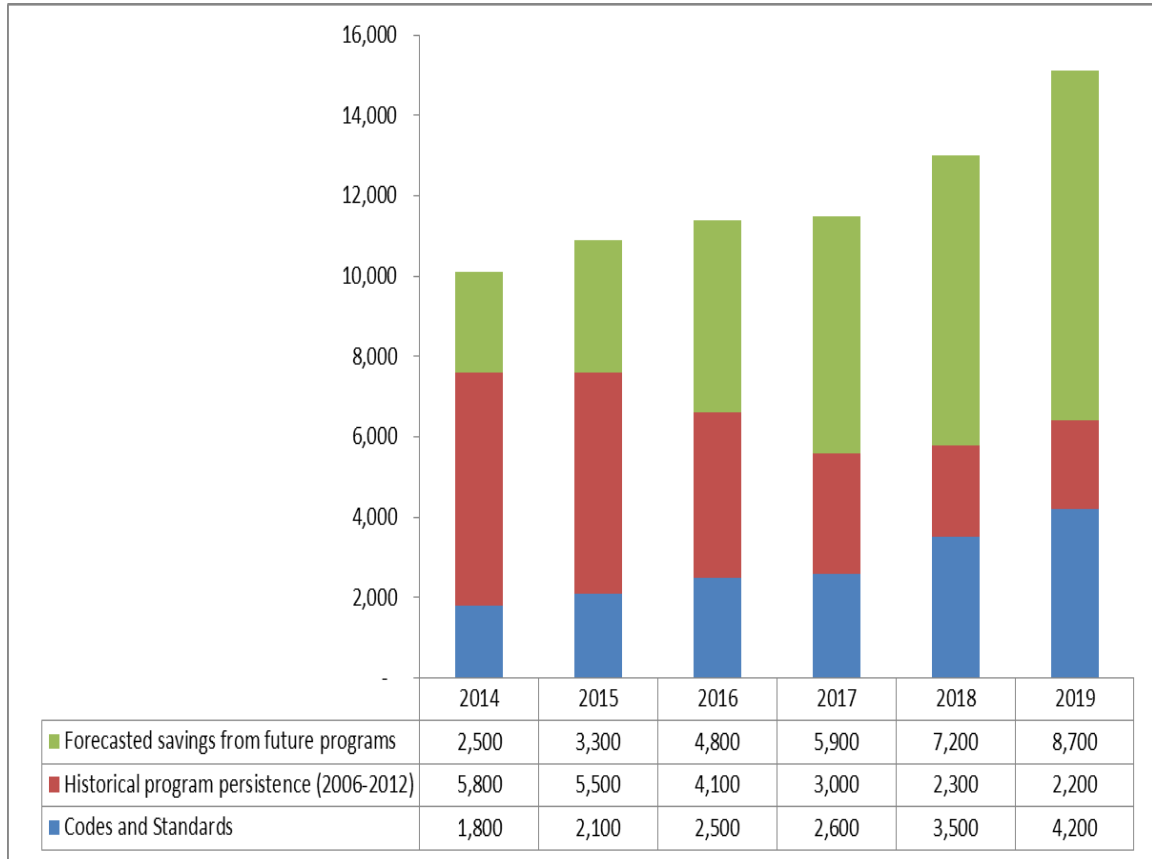
**Hydro One CDM Energy Savings (GWh) by Category**



Note: All savings are at end-use level.

1

**Provincial-Wide Energy Savings (GWh) by Category**



2

3 Note: All savings are at generation level.

4

5 c) The CDM saving values are provided in the charts in (b) and are consistent with the  
6 2013 LTEP.

7

8 d) The large increase of CDM energy savings in 2018/2019 is due to the Codes &  
9 Standards (C&S) programs. The share of Hydro One savings of Ontario savings by  
10 sector is applied to derive the CDM savings by category. The comparison of the  
11 CDM energy savings due to C&S programs for Ontario and Hydro One is provided in  
12 the table below:

13

	Energy saving (GWh)			increase of saving (GWh) vs 2017		growth rate of saving (%) vs 2017	
	2017	2018	2019	2018	2019	2018	2019
Ontario	2,600	3,500	4,200	900	1,600	35%	62%
Hydro One	417	527	637	110	220	26%	53%

14

**Energy Probe Research Foundation (EP) INTERROGATORY #47**

**Issue 6.6**      **Is the load forecast a reasonable reflection of the energy and demand requirements of the applicant? Is the forecast of other rates and charges appropriate? Is the forecast of other revenues appropriate?**

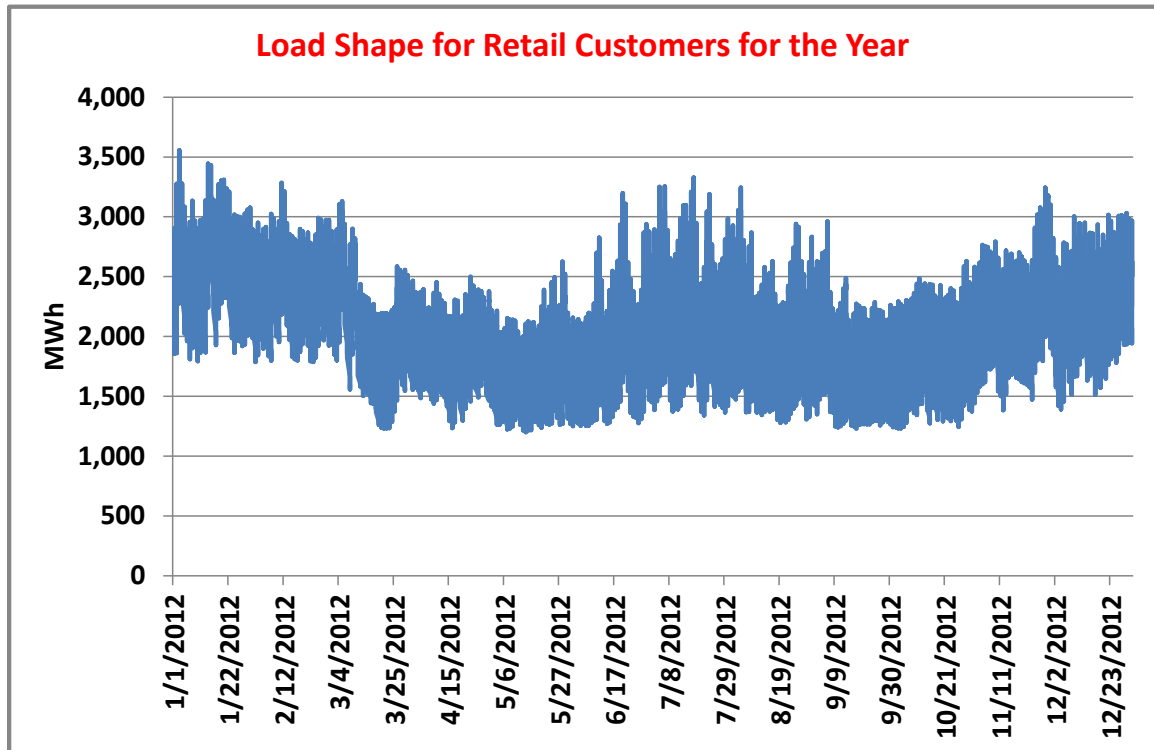
**Interrogatory**

**Reference:**    **Exhibit A, Tab 16, Schedule 2, Page 25 and  
Exhibit A, Tab 16, Schedule 2, Page 28, App B Annual Econometric  
Model**

Does the HO Model for weather normalization use both Cooling Degree Days and Heating Degree Days? Please provide explanation based on winter/summer load and provide appropriate references and a summary of historic and forecast CDD and HDD.

**Response**

Hydro One's weather-normalization model does not use CDD and HDD directly but uses temperature and 3 other weather indicators (wind speed, cloud cover and humidity) in the weather correction analysis, so CDD and HDD are used indirectly (see Section 3.1 on page 14 and Appendix D on page 35 in A/T16/S2 for details). Weather normalization is used for weather correcting the actuals in the monthly econometric model as well as the base year load for all forecasts. Annual econometric models for retail and embedded load use HDD and CDD as explanatory variables. In the retail model, the CDD coefficient was not statistically significant with the correct sign and was dropped from the equation. However, higher HDD is normally associated with lower CDD, so the impact of CDD is picked up indirectly through HDD. Although Hydro One is a winter peaking system, it also has air conditioning load leading to a W-type load shape as demonstrated in the graph below. The requested information for historical and forecast CDD and HDD is presented in the table. The forecast CDD and HDD is the average CDD and HDD in the table.



Year	HDD	CDD
1983	3,991.4	378.2
1984	4,048.6	239.5
1985	4,033.1	198.5
1986	3,920.4	197.4
1987	3,704.6	347.1
1988	4,025.5	388.5
1989	4,197.8	278.7
1990	3,593.3	280.8
1991	3,657.9	394.2
1992	4,045.8	104.9
1993	4,096.9	267.8
1994	4,082.8	251.7
1995	3,992.9	350.5
1996	4,129.6	234.8
1997	3,955.5	248.9
1998	3,197.0	397.6
1999	3,488.9	448.8
2000	3,787.3	243.9
2001	3,387.0	389.6
2002	3,590.2	521.4
2003	3,932.0	321.1
2004	3,748.5	236.1
2005	3,724.5	537.7
2006	3,335.6	386.4
2007	3,644.8	442.6
2008	3,782.4	286.5
2009	3,767.1	208.3
2010	3,456.3	453.8
2011	3,572.9	440.1
2012	3,173.4	495.1
2013	3,722.7	337.1
Average	3,767.3	332.5

**Energy Probe Research Foundation (EP) INTERROGATORY #48**

**Issue 6.6**      **Is the load forecast a reasonable reflection of the energy and demand requirements of the applicant? Is the forecast of other rates and charges appropriate? Is the forecast of other revenues appropriate?**

**Interrogatory**

**Reference:**    **Exhibit A, Tab 16, Schedule 2, Pages 46-48, Table E.7 and E.8b**

Please discuss the major factors that could materially change the load forecast that in the referenced Tables shows a flat Sales (GWh) and Billing Peak (kW) outlook for the plan period.

**Response**

On the negative side, major factors that could materially change the forecast of Sales (in Tables E.7) and Billing Peak (in Table E.8b) include the continuation of the slow economic recovery, a major economic downturn or credit crisis leading to a severe recession, and a drastic increase in CDM impacts above the level currently assumed in the forecast. Conversely, a significant increase in economic activities and/or housing starts above the level assumed in the Consensus forecast, or a major reduction in CDM savings assumed in the forecast, could also affect the load forecast positively.



**Energy Probe Research Foundation (EP) INTERROGATORY #49**

**Issue 6.6** Is the load forecast a reasonable reflection of the energy and demand requirements of the applicant? Is the forecast of other rates and charges appropriate? Is the forecast of other revenues appropriate?

**Interrogatory**

**Reference:** Exhibit A, Tab 16, Schedule 2, Page 8

Preamble:

In Exhibit A, Tab 16, Schedule 2, Page 8, Hydro One is forecasting economic growth of 2.6 percent over the five-year plan.

- a) How would Hydro One's forecasts for customer growth be impacted if economic growth was 2 percent? 1 percent? 3 percent?
- b) Will Hydro One's economic growth forecast be updated to actuals annually? If, for example, the first year economic growth is below Hydro One's target, how will Hydro One factor that into the remaining four years of its five-year plan?

**Response**

- a) Customer growth rates under alternative economic growth scenarios are provided in the following table. The May updated forecast, which is based on an average 2.6% of GDP growth per year, is slightly above the 2% scenario.

**Number of Customer Growth Under Alternative Economic Growth**  
(%)

Year	Economic Growth Scenario		
	1%	2%	3%
2014	0.67	0.82	0.98
2015	0.47	0.65	0.82
2016	0.54	0.75	0.96
2017	0.53	0.74	0.96
2018	0.69	0.90	1.12
2019	0.57	0.79	1.01

- 1    b) Hydro One does not plan to update the load forecast on an annual basis. There will be
- 2       positive and negative factors affecting the load forecast every year but on balance the
- 3       load forecast will be expected to be accurate within one standard deviation over the 5
- 4       year forecast period.

**Energy Probe Research Foundation (EP) INTERROGATORY #50**

**Issue 6.6**      **Is the load forecast a reasonable reflection of the energy and demand requirements of the applicant? Is the forecast of other rates and charges appropriate? Is the forecast of other revenues appropriate?**

**Interrogatory**

**Reference:**    **Exhibit A, Tab 16, Schedule 2**

Preamble:

In Exhibit A, Tab 16, Schedule 2, Hydro One plans on housing starts to increase to 69,000 units per year.

- a) What is the risk to Hydro One's load and new customer forecast if that figure is 60,000 units per year? 50,000 per year?
- b) Will housing start forecasts be updated to actuals annually?
- c) Does Hydro One have any studies concerning the elasticity of customer power demand and prices?
- d) Would the end of the Clean Energy Benefit, combined with distribution increases on customers' bills have a noticeable impact on customer demand? Does Hydro One have any studies regarding this?

**Response**

- a) The risk to Hydro One's load forecast and new customer forecast using 50,000 units and 60,000 units per year of housing starts is estimated below.

**Impact of Alternative Scenarios for Housing Starts on Load Forecast**

Scenario:	Change (GWh)		Change Percent of Forecast	
	50,000	60,000	50,000	60,000
2014	-42	5	-0.11	0.01
2015	-48	-2	-0.13	0.00
2016	-87	-41	-0.23	-0.11
2017	-102	-56	-0.27	-0.15
2018	-116	-70	-0.31	-0.18
2019	-87	-42	-0.23	-0.11

**Impact of Alternative Scenarios for Housing Starts on Number of Customers Forecast**

Scenario:	Change		Change Percent of Forecast	
	50,000	60,000	50,000	60,000
2014	-1507	175	-0.12	0.01
2015	-1739	-57	-0.13	0.00
2016	-3161	-1480	-0.24	-0.11
2017	-3709	-2028	-0.28	-0.15
2018	-4261	-2579	-0.32	-0.19
2019	-3223	-1541	-0.24	-0.12

- b) Hydro One has no plans to update the housing starts forecast on an annual basis.
- c) Hydro One has not done any studies.
- d) The end of the Clean Air Energy Benefits and increases in distribution charges on customer bills are not expected to have a noticeable impact on customer demand. Hydro One has not done any studies.

**Energy Probe Research Foundation (EP) INTERROGATORY #51**

**Issue 6.6**      **Is the load forecast a reasonable reflection of the energy and demand requirements of the applicant? Is the forecast of other rates and charges appropriate? Is the forecast of other revenues appropriate?**

**Interrogatory**

**Reference:**    **Exhibit A, Tab 16, Schedule 3, Table 15**

Preamble:

In Exhibit A, Tab 16, Schedule 3, Table 15 shows that Hydro One Customers are increasing the amount of energy conserved outside of incentives from Hydro One and Government programs.

- a) Does Hydro One expect this trend to continue?
- b) If so, will it have a noticeable impact on Hydro One's load forecast?
- c) If non-targeted conservation increases significantly, would this be considered an off-ramp by Hydro One for its five-year plan?
- d) Does Hydro One have any estimates on the impact that higher prices will have on non-targeted conservation?
- e) Does Hydro One have any estimates on whether the Board's move towards decoupling will have an effect on its load forecast?

**Response**

- a) Yes, this trend is expected to continue but at a much slower rate of growth compared to previous years.
- b) It will not have any impact in the load forecast submitted in this rate application. In the forecast period (2015-2019), Hydro One uses CDM categories consistent with the OPA and does not include any impacts associated with customer own actions.
- c) Given the responses in (a) and (b) above, Hydro One does not expect this impact, even if it increases significantly, would trigger an off-ramp consideration.
- d) Hydro One does not have any estimates.
- e) Hydro One does not have any estimates.

**Energy Probe Research Foundation (EP) INTERROGATORY #52**

**Issue 6.6      Is the load forecast a reasonable reflection of the energy and demand requirements of the applicant? Is the forecast of other rates and charges appropriate? Is the forecast of other revenues appropriate?**

**Interrogatory**

**Reference:    Exhibit A, Tab 16, Schedule 3, Table 18**

In Exhibit A, Tab 16, Schedule 3, Table 18 Hydro One reports an increase in Estimated Savings from Customers' Own Actions. Does it have a similar forecast or estimate for the duration of its five-year plan?

**Response**

- a) The estimated savings from Customers' Own Actions are based on customer survey responses and are not forecasted. The most recent survey conducted by Hydro One was in December 2013. Estimated savings from Customers' Own Actions in 2013 are 379 GWh.

**Association of Major Power Consumers in Ontario (AMPCO) INTERROGATORY**  
**#38**

**Issue 6.6**      **Is the load forecast a reasonable reflection of the energy and demand requirements of the applicant? Is the forecast of other rates and charges appropriate? Is the forecast of other revenues appropriate?**

**Interrogatory**

**Reference: Exhibit A/Tab 16/Schedule 4/Table 2**

a) Please update this table with 2012 and 2013 data, and include actual, non-corrected data for all years.

**Response**

The requested information is provided below.

**Province-wide Annual Energy Saving by Category (TWh)**

	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Forecasted savings from future programs		1.0	2.5	3.3	4.8	5.9	7.2	8.7
Historical program persistence (2006-2012)	6.0	5.9	5.8	5.5	4.1	3.0	2.3	2.2
Codes and Standards (forecasted savings)	0.0	0.2	0.2	0.5	0.9	1.0	1.9	2.6
Codes and Standards (existing savings)	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
LTEP 2013 total energy savings	7.6	8.6	10.1	10.9	11.3	11.4	13.0	15.1

Source: Ontario Power Authority. Savings are at generation level including TX and DX losses