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THE ONTARIO ENERGY BOARD

RENEWED REGULATORY FRAMEWORK FOR ELECTRICITY

STAKEHOLDER CONFERENCE

Held at 2300 Yonge Street,
25th Floor, Toronto, Ontario,
on Thursday, January 10, 2013,
commencing at 9:30 a.m.

A P P E A R A N C E S

ROSEMARIE LECLAIR	Board Chair and CEO
CYNTHIA CHAPLIN	Vice-Chair and Member
MARIKA HARE	Member
PAULA CONBOY	Member
CHRISTINE LONG	Member
EMAD ELSAYED	Member
PETER FRASER	Board Staff
BRIAN HEWSON	
LISA BRICKENDEN	
LAURIE KLEIN	
DUNCAN SKINNER	
EJIRO WINTHORPE	
PRESENTERS:	
BRIAN HEWSON	Ontario Energy Board
LISA BRICKENDEN	
LARRY KAUFMANN	Pacific Economics Group (PEG)
ALSO PRESENT:	
JULIE GIRVAN	Consumers Council of Canada
MAURICE TUCCI	Electricity Distributors
ADONIS YATCHEW	Association (EDA)
GIA DeJULIO	Enersource Hydro
ANDREW SASSO	EnWin Utilities
INDY BUTANY-DeSOUSA	Horizon Utilities
CARM ALTOMARE	Hydro One Networks Inc. (HONI)
ALLAN COWAN	

A P P E A R A N C E S

PATRICK HOEY JANE SCOTT	Hydro Ottawa
MARGARET NANNINGA	Kitchener-Wilmot Hydro
JUDY SIMON	Low Income Energy Network (LIEN)
RICHARD STEPHENSON JUDY KWIK	Power Workers' Union
ELENA YAMPOLSKY	Powerstream Inc.
JAY SHEPHERD	School Energy Coalition (SEC)
COLIN McLORG ALEX BAKULEV	Toronto Hydro-Electric System Ltd. (THESL)
JEFF GUILBEAULT	Peterborough Distribution
LORI McLORG	Veridian Connections
BILL HARPER	Vulnerable Energy Consumers' Coalition

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1 Thursday, January 10, 2013

2 --- On commencing at 9:30 a.m.

3 MS. BRICKENDEN: Good morning, everyone. I would like
4 to make a brief announcement before we commence.
5 Unfortunately our remote participation technology has a bit
6 a hiccup and we are currently setting up a new feed for
7 those of you who -- they won't be hearing me, actually, so
8 I feel a little silly saying this, but to the people in the
9 room, we are e-mailing new instructions for people who wish
10 to participate remotely, and also individuals that are out
11 there - I see now we are on air - please contact our IT
12 help group and they will send you the new instructions on
13 how to log in, okay? Thank you.

14 I'd like to pass the mic over to Peter Fraser.

15 **OPENING REMARKS BY PETER FRASER:**

16 MR. FRASER: Well, good morning, everybody, and
17 welcome to this stakeholder meeting addressing performance
18 measures and benchmarking. My name is Peter Fraser. I'm
19 the managing director of regulatory policy here at the OEB,
20 and I would like to start off with a few introductions.

21 To my left is Brian Hewson, who is the lead on the
22 renewable regulatory framework for electricity project here
23 at the Board, and to his left Duncan Skinner, who many of
24 you may well know is a longstanding expert within the Board
25 on these issues of the performance measures and data that
26 we've been collecting over the years. Lisa Brickenden, I'm
27 sure many of you are aware, who spoke to you initially,
28 Lisa is our lead on the performance measures project.

1 She's being assisted by Laurie Klein, who is sitting on the
2 right here.

3 To my immediate right is Larry Kaufmann, who is a
4 consultant and is a renowned international expert in this
5 field, and Ejiro Winthorpe. Ejiro is the person who is
6 going to have to be handling all this data trying to turn
7 it into something sensible and put together a scorecard
8 that we are all going to be able to use. So he has
9 actually the toughest job of all and I guess a big interest
10 in making sure we get this right.

11 The session today is a stakeholder meeting, meaning it
12 is not a hearing, but an informal session convened by the
13 Staff. We have with us today a number of Board members,
14 from Rosemarie Leclair, our chair; Marika Hare, Christine
15 Long, Emad Elsayed, Paula Conboy. Am I missing anyone
16 there? So that's five. That's five so far.

17 Board members will be here and many will be -- well, I
18 don't know who will be dropping in and out during the
19 session, but the focus on the session I would say is really
20 as an opportunity for everybody in this room, and,
21 hopefully, when we get them hooked up, to people remotely,
22 as well, to exchange views on this important topic. It is
23 an opportunity for us to listen.

24 And I would say is particularly a great opportunity
25 for those who participate today, because we have with us or
26 we will have remotely the members of the working group,
27 which are having their initial measuring performance -- or
28 their initial meeting tomorrow. So I think it's a good

1 opportunity for the working group members, as well, to hear
2 what you have to say and to get your views on this.

3 Now, just to go a little bit into the purpose of the
4 session, of course, as you all know, on October 18th the
5 Board issued the report of the board, "A Renewed Regulatory
6 Framework for Electricity Distributors: A Performance
7 Based Approach". That report set out the Board's
8 determination to move towards an outcomes-based approach to
9 regulation setting four specific outcomes that electricity
10 distributors should be focussed on.

11 The report described a need for a robust performance
12 measurement system to support the new framework, including
13 identification of specific performance metrics related to
14 those four outcomes.

15 The Board determined that a new performance regime
16 would include reporting of performance via scorecard, which
17 would allow the Board, stakeholders, other LDCs and, most
18 importantly, customers to understand how their distributor
19 was performing.

20 The Board's report really set out for us a direction
21 to follow, but today is the commencement of the
22 consultation on the details, on the development of the
23 performance measures, on the actual measures that we're
24 going to use, the actual composition of that scorecard and
25 the empirical analysis that will underpin the rate-setting
26 options and the regulatory framework.

27 Scarcity could be that we have a number of initiatives
28 involved with the implementation of the RRFE, which Brian

1 will get into in a few minutes. This scarcity could be
2 more important to our whole initiative.

3 As a springboard for the discussion today, Board Staff
4 and Larry will make presentations on the materials that
5 were posted in December. Preliminary issues for
6 consultation were included in these materials to help
7 stakeholders prepare for the stakeholder meeting.

8 The purpose of this session is to give you, the
9 participants, an opportunity to discuss these proposals and
10 issues put forward by Staff and PEG and for our first
11 opportunity to really get into some of the details.

12 They will form a key input to the working group that's
13 meeting tomorrow, apart from working through the details of
14 performance benchmarking and a total factor productivity
15 work. And the work -- as I mentioned, the working group
16 starts tomorrow. The materials for that group will be
17 available on the Board's website to all interested
18 stakeholders to stay informed of its progress.

19 The agenda that has been set for today provides for a
20 presentation on each of the topics, then followed by a
21 general discussion. We've also allowed time at the end of
22 the presentations at the end part of this meeting to
23 address any other general matters.

24 Are there any questions at this point? I'm not sure.
25 Do we have the remote up yet?

26 MS. BRICKENDEN: We do have the visuals up that are
27 being projected remotely. We will have to find out through
28 the e-mail system if the folks who are participating

1 remotely can see them. They can hear us. They may not yet
2 be able to see the visuals.

3 MR. FRASER: Hopefully that will get up and running
4 shortly, but not wanting to delay things any further, I'm
5 going to turn it over Lisa now, who is acting as
6 facilitator for this meeting, and have her go over some of
7 the logistics before moving on with the substance of the
8 day. Thank you, Lisa.

9 MS. BRICKENDEN: Ironical to go over the logistics when
10 they're not working as nicely as I might like. However,
11 for those of you who are in the room, as you are aware,
12 this meeting is being transcribed, so I would ask, when you
13 do speak, if you would use a microphone, introduce yourself
14 prior to speaking into the mic.

15 The details on how to participate, as I mentioned,
16 remotely are being e-mailed out to remote participants, and
17 I will be following up with that as soon as I finish this
18 intro.

19 Remote participants, you are able to ask questions at
20 any point throughout the presentations by, please, e-
21 mailing our RRF at ontarioenergyboard.ca account. We have
22 Laurie Klein here monitoring that account, and we will read
23 out your questions as we receive them. When you do e-mail
24 in, it would be very helpful if you were to provide your
25 name in the e-mail so we can introduce you.

26 Before we begin, there are a few general housekeeping
27 matters I would like to address. Many of you who have
28 visited the Board know this already, but I do see a couple

1 of new faces. There are washrooms on this floor just
2 outside of this room on either side of the elevator for
3 your convenience.

4 We will have refreshments available throughout the
5 day. We have ordered coffee and water for your
6 convenience, and it will be just outside the second door.

7 Also, finally, the OEB has established emergency
8 evacuation procedures. In the case of an emergency or a
9 general alarm, I will suspend our meeting and provide you
10 with the necessary instructions to follow in order to
11 achieve an orderly evacuation, if necessary.

12 Are there any questions in the room before I -- all
13 right. I would like to ask Brian now to provide a bit of
14 an overview for us on some related initiatives that are
15 going on to implement the Board's renewed regulatory
16 framework. Brian.

17 **UPDATE ON OTHER RENEWED REGULATORY FRAMEWORK**

18 **IMPLEMENTATION INITIATIVES**

19 **PRESENTATION BY MR. HEWSON:**

20 MR. HEWSON: Thank you, Lisa, and good morning,
21 everyone. As many of you know from reading the report, the
22 Board set out a number of key initiatives that were
23 important to implement its policy direction in the renewed
24 regulatory framework, specifically five initiatives
25 regarding performance measures, smart grid, regional
26 infrastructure planning and distribution planning. And
27 what I'm going to do is give you a quick overview of where
28 we are with those different initiatives, and I'm happy to

1 entertain any questions people have.

2 Performance benchmarking and rate setting, obviously
3 this is the first day of the discussion and work on that
4 initiative, so I don't really have anything further to say
5 until after today.

6 On smart grid, as you will recall, the Board set out a
7 couple of key determinations in the renewed regulatory
8 framework report, and then indicated that it would
9 reconvene the smart grid working group to advise Staff and
10 ultimately the Board on how to address remaining issues
11 related to smart grid development in the province. We did
12 reconvene that working group in November. They met several
13 times. At this point, the processes that Staff are working
14 with the Board to develop a report, which we expect -- a
15 supplemental report on smart grid that will provide
16 direction to regulated entities should be out some time in
17 the early part of February. That's our plan.

18 In terms of regional infrastructure planning, as you
19 will recall, the Board determined that regional
20 infrastructure planning should be undertaken in the
21 province to assist in ensuring that there was coordination
22 across transmission and distribution systems in the way
23 that capital planning was being undertaken, and that assets
24 were being deployed across the province. To undertake the
25 development of that process, the Board instructed Staff to
26 establish a working group that would report back as the
27 working group to the Board. So that -- the important
28 element here is the working group that has been established

1 is developing its report on how the process for regional
2 infrastructure planning should be undertaken. And we will
3 be providing that to the Board, we expect, early in
4 February.

5 The other part of the regional infrastructure planning
6 section of the report dealt with facilitating the planning
7 process, and in fact what the Board identified were a
8 number of the key areas within its own codes in the cost
9 allocation process that should be addressed and looked at
10 in order to try to facilitate regional planning.

11 A key element of that is to look at the definition of
12 certain types of assets that are currently defined as
13 connection assets and whether they carry out more of a
14 transmission network function. We established a working
15 group that has met several times and provided advice to
16 Staff in terms of how to look at redefining certain assets
17 for the purpose of future capital planning capital
18 contributions, and that work is going to come out through a
19 set of proposed code amendments, probably later in
20 February. Those code amendments will probably include, as
21 well, anything related to the regional infrastructure
22 planning process that the Board believes needs to be dealt
23 with through code amendments.

24 The last initiative I wanted to talk about is the
25 distribution network investment planning. So in the report
26 the Board established a couple of key things.

27 One, that distributors should be filing five-year
28 capital plans that are integrated capital plans, cover all

1 of their capital spending in one aggregated plan. And in
2 order to carry that out, the Board recognized it needed to
3 first look at what the appropriate filing requirements
4 should be to try and facilitate that, as well as what
5 standardization and clarity the Board could provide in
6 terms of the type of assessment tools and evaluation
7 mechanisms that should be undertaken by utilities and
8 provided as evidence in those filing requirements, so that
9 the Board and stakeholders can evaluate effectively those
10 five-year capital plans.

11 We established a working group that has met twice, and
12 they've started the work, and on the first phase of their
13 work they focussed on taking the existing filing
14 requirements and existing parts of the renewed regulatory
15 framework and looking at how to start to provide greater
16 clarity to develop that five-year planning requirement.

17 The next phase of the work, which will start very
18 shortly with the working group, is to look at the
19 assessment tools and evaluation criteria that will be
20 included as part of the filing requirements.

21 As well, once we've completed our smart grid work, the
22 Board has completed its smart grid work, and the regional
23 infrastructure planning process has reported, we anticipate
24 the working group will assist us in developing the
25 integration of those parts into the consolidated capital
26 plans, and with the expectation that those capital plan
27 filing requirements will be out by the end of February to
28 inform distributors as they develop their applications to

1 be filed in October of this year.

2 And I'm happy to answer any questions, or otherwise
3 we'll hand it over to Lisa to get on with the substance of
4 today.

5 MS. GIRVAN: Lisa, if you read the screen, it says
6 that people can't hear the audio.

7 MS. BRICKENDEN: I just noticed that. I was hoping
8 that seeing the little bubbles pop up, I was pleased to see
9 people were finally connecting, but no, I will have to --
10 unfortunately, not good if they can't hear. If I could ask
11 one of my colleagues to please -- okay. It might be good
12 if you -- I'm sorry for the inconvenience, but it might be
13 good for us to take a momentary break so everyone out there
14 can hear what we're presenting.

15 Perhaps we should break and start again at 10:00.
16 How's that? Thank you.

17 --- Recess taken at 9:48 a.m.

18 --- On resuming at 10:00 a.m.

19 **OVERVIEW BY MS. BRICKENDEN:**

20 MS. BRICKENDEN: I believe Brian had passed the baton
21 back to me. Thank you, Brian.

22 Over the next few minutes, I would like to provide a
23 brief overview and review of the Staff proposal with
24 respect to performance measures and a scorecard that we
25 issued to you in December.

26 Just a brief overview reminder - it's been a while -
27 that our process to date and our consultations to date have
28 been at strategic level. This was important to help the

1 Board to determine the direction of changes set out in its
2 October 18 report on renewed regulatory framework for
3 electricity distributors. Consultations now, as Peter
4 pointed out, are focussing on implementation of the
5 framework.

6 Our focus today is on the performance and benchmarking
7 elements of that framework. In its October 18th report,
8 the Board described a comprehensive performance-based
9 approach for renewed regulatory framework which promotes
10 achievement of outcomes that will benefit existing and
11 future customers.

12 The approach will better align customer and
13 distributor interests, continue to support the achievement
14 of important public policy objectives, and place the
15 greater focus on delivering value for money.

16 Under this approach a distributor will be expected to
17 continuously improve its understanding of the needs and
18 expectations of its customers and the delivery of its
19 services, which in turn may lead to reduced costs for
20 consumers.

21 To commence work on implementation of the framework,
22 Board Staff were asked to prepare a proposal as a
23 springboard to discussion at this meeting today on measures
24 that might best reflect a distributor's effectiveness
25 and/or continuous improvement in achieving the outcomes and
26 the scorecard as a means of organizing how distributors
27 will report on their performance.

28 Slide 5, albeit rather busy -- I do apologize. It is

1 small, the text. However, it provides the complete summary
2 of Staff's proposed measures. Before discussing those
3 measures, I would like to briefly describe the columns in
4 the summary.

5 The first column lists the four performance outcomes
6 as they are set out in the Board's report, those being
7 customer focus, operational effectiveness, public policy
8 responsiveness and financial performance.

9 The second column identifies Staff's proposed
10 performance categories. We propose these categories as a
11 means of grouping the measures into meaningful buckets, so
12 to speak, which are intended to help align the measures
13 with the performance outcomes.

14 The categories on this slide are based on Staff's
15 review of the existing standards and measures for
16 electricity distributors that have been established by the
17 Board, the distribution network investment planning
18 consultations currently being carried out, which will
19 consider asset management, and some scorecards from other
20 energy companies in North America.

21 We look particularly at a scorecard from Memphis Light
22 Gas and Water in the States, and we also dug into our
23 archives and took a look at an Ontario Hydro services
24 company scorecard, and we were also able to have a look at
25 the IESO scorecard as they publish it on their website.

26 The last column lists the proposed measures in each
27 performance category. Why do we select these particular
28 measures? Many of them leverage existing standards and

1 measures in the RRR, other Board codes and/or the annual
2 reports we publish. Some also appear on the other
3 scorecards that we canvassed. A larger document that we
4 issued along with this PowerPoint deck on December 6th,
5 entitled "Measures For Electricity Distributor
6 Performance", provides a detailed description of the
7 proposed measures, along with additional measures that were
8 listed in the codes or in the existing reporting
9 requirements.

10 You probably noted, in reviewing this material in
11 advance, that not all of the existing standards and
12 measures for electricity distributors that have been
13 established by the Board are included in Staff's proposal.
14 It will be determined later, after we've completed these
15 consultations and the Board has issued its supplemental
16 report, whether the standards and measures not included
17 will continue to be part of the Board's regulatory
18 reporting requirements.

19 With respect to the proposed measures, broadly
20 speaking, Staff selected them because they fit well, we
21 feel, with the Board's criteria as set out in this report.
22 Specifically the proposed measures are already well
23 defined, whether in the Board's regulatory instruments or
24 more broadly in business. They are common in other
25 jurisdictions and seen on other scorecards. They are
26 currently being reported and/or recorded by distributors
27 today, so we have a building database to record on.

28 And many have consequences in place already associated

1 with them, and some have targets that the Board has set in
2 relation to those measures.

3 Staff are proposing a few new measures, however, in
4 the areas of customer satisfaction, cost performance, asset
5 management and the connection of renewable generation.

6 The new measures proposed in the customer satisfaction
7 category are commonly used measures. Also, customer
8 complaints are currently being captioned through existing
9 record-keeping requirements. Further, some distributors
10 have indicated in these consultations to date that they do
11 survey their customers, so we're not inventing something
12 totally new. We are taking advantage of or leveraging
13 information that is already critical to the business.

14 The new measures proposed in the overall cost
15 performance category are also commonly used measures.
16 Staff is proposing two capital measures that would
17 complement the existing OM&A measures. We are moving
18 towards a total cost approach to a window -- building a
19 total cost window into the business and our benchmarking.
20 So it would be good to have the capital measures on the
21 scorecard.

22 Net plant cost per customer is a unit cost metric that
23 provides an indication of how much a company has invested
24 to provide service to its customers, and it can be derived
25 using data that is already publish. The capital budget
26 versus actual is proposed to align with and support the
27 move to multi-year planning and approvals.

28 As you know, and I think Brian provided an overview of

1 the consultations going on, underway, with respect to
2 distribution network investment -- that consultation will
3 include discussions on asset management, and that will
4 inform our work.

5 The new measure proposed in the connection of
6 renewable generation category is intended to more closely
7 align with load connection requirements. Staff notes that
8 the information is already being captured through the
9 Distribution System Code and RRR requirements, and that
10 this kind of measure would support public policy
11 responsiveness in relation to renewals.

12 The next two slides set out the issues for
13 consultation on the proposed measures, but in addition to
14 any other issues you would like to raise, we want to hear
15 your views on this. This is important, because along with
16 your comments today, any additional issues that you bring
17 to our attention, this will collectively provide a work
18 plan for the PPR working group. Colin?

19 MR. McLORG: Thanks, Lisa. Colin McLorg at Toronto
20 Hydro. Really just a procedural question. If we have
21 clarifying questions for you, would you like to have them
22 now and reserve the more substantive questions for later?
23 Or do you have any preference as to how questions are
24 fielded?

25 MS. BRICKENDEN: Personally, no. If there's a
26 clarifying questions, please, by all means.

27 MR. McLORG: Well, I did have one. It was on the
28 prior slide, and it had to do with capital budget versus

1 actual. It just wasn't clear to us what exactly was being
2 referred to as the capital budget. Is that the Board-
3 approved budget, or is it the company's own internal
4 budget, or how is that to be understood?

5 MS. BRICKENDEN: We don't know yet. My personal view
6 is I think logically it should be Board-approved. And the
7 company's performance towards that commitment, those
8 commitments are what will be built into rates going
9 forward, and so it would be good to have a trend on the
10 performance against that commitment. That's the intent.

11 MR. McLORG: Okay. Thanks.

12 MS. BRICKENDEN: But I think we need to discuss that
13 further with the working group. It would be helpful.

14 MR. McLORG: I don't want to verge into a substantive
15 discussion right now, but again in the nature of
16 clarification, just with respect to customer complaints, we
17 were wondering whether there is going -- and maybe you'll
18 say this is to be determined. Whether there will be any
19 narrower definition of that, because utilities are subject
20 to -- because they are the front end of contact with all
21 customers, utilities tend to get a lot of complaints about
22 things that don't have to do with utilities, but rather
23 have to do with commodity costs or energy retailers or
24 something else like that.

25 So I'm not sure if that's really a clarifying question
26 or a substantive question, but the issue is whether or not
27 there is going to be any process to filter or qualify
28 complaints for inclusion in the scorecard tally.

1 MS. BRICKENDEN: I think, yes, there would have to be.
2 Don't have it now, Colin, but there would have to be.
3 Personally, I think that you would only ever want to have
4 escalated, like -- we would have to have that conversation.

5 From what I've seen on the scorecards I've looked at,
6 they're not referring to the host of thousands of calls
7 that come in and are resolved on a daily basis. It's
8 significant -- and escalated issues, recurring issues,
9 but...

10 MR. McLORG: Okay. Well, that's very helpful.
11 Thanks.

12 MS. BRICKENDEN: It's on our agenda for the working
13 group.

14 Are there any other questions, clarifying questions or
15 comments? I would like to open up the floor and get
16 thoughts on some of the issues for comment that we have set
17 out on the material I've presented to date.

18 What are your thoughts? What was your first reaction
19 when you read this? Do the proposed pressures align well
20 and reflect your effectiveness as a distributor, or from a
21 stakeholder standpoint, your view on the effectiveness of
22 the distributor in achieving the Board's performance
23 outcomes? Judy?

24 **Q&A/DISCUSSION SESSION**

25 MS. KWIK: It's Judy Kwik for the Power Workers'
26 Union. One measure I notice was missing that I think
27 should be included is line losses.

28 MS. BRICKENDEN: Line losses? Okay. Are there any

1 other views on that? Colin?

2 MR. McLORG: As several of us believe, it's very
3 important to have safety on here, worker safety and public
4 safety.

5 MS. BRICKENDEN: How do these measures -- I'm curious
6 -- how do these measures align, if I might ask the
7 distributors in the room, with the things that matter to
8 you, the things that you have on your scorecards or the
9 things that keep you up at night? Carm?

10 MR. ALTOMARE: Carm Altomare, Hydro One.

11 When I looked at this package, I thought one of the
12 missing ingredients was to have a balanced scorecard. I
13 agree with Colin that safety should be added in there, but
14 when you put a scorecard together, it should be focussing
15 on what your strategic objectives are of the utility, and
16 then the measures on tracking those objectives to see if
17 you're meeting those objectives at the end of the day or at
18 the end of the five years.

19 But another area may be environment; it's another part
20 that's missing. And I don't think we should be overly
21 focusing on costs, because it takes away from the balanced
22 scorecard approach. I know traditionally we were always
23 focussed on costs and we were always focussed on financial
24 measures, and then shortly after, we introduced
25 reliability.

26 But when you look at the industry south of the border,
27 with the balanced scorecard approach by Kaplan, it
28 certainly emphasized the need of how to effectively develop

1 a scorecard that looks at all the areas of the utility.

2 So I would strongly recommend that we use a balanced
3 scorecard approach.

4 MS. BRICKENDEN: Are there any other thoughts on that?
5 Colin?

6 MR. McLORG: I wonder if I could engage in a slight
7 discussion with Carm. I don't mean to derail anything, but
8 again for clarifying, Carm, is it your belief the utilities
9 own internal scorecard should be identical to the one that
10 is used for regulatory purposes? Or can you see that there
11 would be possibly a regulatory scorecard that would be
12 probably common to all utilities, and then utilities could
13 have their own scorecard that might overlap to a very high
14 degree with the regulatory one, but still could be
15 conceptually distinct?

16 MR. ALTOMARE: I think we're in the early stages of
17 that development, and your point is well taken. I would
18 envision that you would have a regulatory scorecard, and
19 there should be some linkage with the internal scorecard,
20 because in essence, what's the purpose of the scorecard?
21 It's to monitor how we're doing in meeting our strategic
22 objectives, but it's also, more importantly, in trying to
23 drive the right behaviour in the company.

24 So there has to be some alignment there in how we do
25 it. I'm pretty open at this point, but I think that's a
26 discussion for down the road. And realizing that with the
27 regulatory scorecard, some of the measures are already
28 included in our reporting processes, like reliability and

1 customer service metrics, and some of these other metrics
2 that are coming to the forefront -- for example, customer
3 complaints -- I couldn't agree with you more, Colin, that
4 customer complaints may not necessarily be a good measure
5 for scorecards.

6 But I think that's the whole purpose of the working
7 committee, to have that discussion.

8 MR. McLORG: I was only thinking -- I agree with what
9 you're saying. I was only thinking that there could be
10 some internal targets that a company would legitimately
11 have. Attendance might be one of them, if a company has an
12 attendance problem with some sectors of its staff, but that
13 wouldn't necessarily be of direct interest to the regulator
14 or customers per se.

15 MS. BRICKENDEN: Jay, you had a question?

16 MR. SHEPHERD: Yes. My response to Colin's question
17 is you would have to have a pretty good reason for the
18 goals of the utility, which are expressed in the scorecard,
19 to be different from the goals of the regulator.

20 I take your point, whether for reason of granularity
21 or for reason of metrics that are not outcomes based, but
22 are, rather, process based, you might have situations where
23 you have additional ones. I think that's fair.

24 MS. BRICKENDEN: Bill?

25 MR. HARPER: Just to show that there's no unanimity
26 between intervenors, just like there's no unanimity between
27 -- actually, because when Colin raised his question, I had
28 -- Bill Harper, excuse me. I had a similar view in terms

1 of whether the two had to be precisely the same in terms of
2 you had a regulator which has a stated set of objectives in
3 terms of reasons why it is regulating which, to some
4 extent, may not match.

5 Another example that came to mind is I know utilities
6 that have scorecards that include -- very highly in terms
7 of issues around employment equity, First Nations hiring,
8 things like that, which may not sort of -- which may not
9 attune themselves as well with the regulator's perspective,
10 but, depending on the utility you have, it may be very much
11 fundamental to what they believe are the things they should
12 be doing.

13 One way to do that may be to have -- if you wanted to,
14 maybe to have a scorecard that picked up the regulator's
15 things and maybe has sort of a little box at the bottom
16 whereby, if an individual utility wanted to put something
17 in there that was specific to them that they thought should
18 be -- you know, help balance the whole thing out, they
19 could fill in that and that could be given a weight up to a
20 certain amount, sort of thing. You know, that's just an
21 idea to throw out for consideration.

22 MS. BRICKENDEN: Thank you, Bill. Just a reminder,
23 too. I know Nancy has drawn a little map of the people who
24 are sitting in the room, but could you please announce your
25 name as you enter.

26 MR. SASSO: Andrew Sasso from Enwin Utilities. I was
27 going to get to it a little later under 7(c), which is
28 about the scorecard features. I think it makes sense that

1 there be predominantly a fundamentally singular scorecard.
2 That might be 80 percent, 90 percent that's common to
3 everybody, but I guess our thought is, when we're talking
4 about when they should be set and what should the
5 weightings be and all that kind of thing, that in a cost of
6 service proceeding, or if you are on annual IR it might be
7 once every five years or something, you would establish
8 that on a very utility-specific basis. And it should align
9 very closely to your capital plan, your operating expenses,
10 the issues you're facing as a utility and that you're
11 seeking rates for.

12 I mean, I think that is the point, but I think we see
13 in many utilities those priorities may be different, and
14 certainly the weighting among those different priorities
15 may need to be different because of the age of the utility,
16 the nature of the customers, the different challenges
17 they're facing from time to time.

18 So I know it jumps ahead a little bit, the question of
19 weighting and so on, so I don't mean to get it off track,
20 but I think there does need to be some utility-specific
21 consideration given to how the scorecard is created.

22 That being said, I think this is really, really good
23 and I think that, at least for us, certainly once you
24 include safety and line losses, it does align very closely
25 to the sort of things that we would consider.

26 MR. HOEY: Lisa, it is Patrick Hoey with Hydro Ottawa.

27 I tend to agree with most of the people that there be
28 a high degree of alignment, but I do not believe that there

1 would be 100 percent alignment, because the scorecards, at
2 least for our company, will be developed by our board of
3 directors and by our shareholders, and they may have
4 different priority in particular areas that are different
5 than the set here for regulatory purposes, and that's
6 because this scorecard tends to focus on customer and not
7 necessarily on the shareholders' needs, as well, which will
8 have to be addressed.

9 So there will be a high level of alignment, but I
10 don't believe there will be total alignment.

11 MS. BRICKENDEN: Gia.

12 MS. DEJULIO: Thank you. It's Gia DeJulio from
13 Enersource. I think most of us are very pleased to see the
14 focus on customers in this, and we're very intrigued by the
15 customer survey measure, but I'm worried about the cost of
16 that, because many of us already do our own surveys, not
17 all of us, though, every year, and one would expect this
18 would be an annual requirement.

19 We're worried if that would then add significant cost
20 to all distributors and, hence, for all ratepayers, to
21 conduct a survey on an annual basis and, you know, how
22 detailed would this survey be. Those of us who already
23 conduct our own customer surveys, you know, they are quite
24 -- some of them are quite long and they are for very
25 specific purposes. And, you know, we ask questions that
26 probably generally, you know, the OEB and constituents
27 wouldn't be that interested in knowing, you know, things
28 like comparing us to your gas distributor: What do you

1 think of us now?

2 I would really want to see obviously a common
3 questionnaire or survey for all the distributors in order
4 for the OEB to make valid comparisons among that group, and
5 just very concerned about what the cost might be for that.

6 MS. BRICKENDEN: Thank you, Gia.

7 MS. BUTANY-DeSOUZA: Indy Butany, Horizon Utilities.
8 As a follow-on to Gia's comments, again, I would second
9 that we are happy to see the focus on the customer, but in
10 the area of a customer survey, at the end of the day there
11 is an issue of comparability. So in the absence of the OEB
12 of taking on the role of having that standardized approach
13 to a survey, you end up with an apples-to-oranges
14 comparison as between distributors, and it's not
15 necessarily the case that every LDC in the province
16 conducts a customer survey, in any event.

17 The other thing that we've seen from customer surveys
18 that we've conducted, depending on the facilitator of that
19 customer survey - again, it goes back to whether or not the
20 OEB is conducting a survey as a standardized approach
21 across all LDCs - is there is something to be said for the
22 timing of the survey. Is it close to a rate change or not,
23 a comparison to other service providers, as Gia has noted,
24 with respect to gas distributors, gas marketers, and, also,
25 in addition to that, there is the issue of: Are you
26 offering the customer a chance to say no answer, or are you
27 offering the customer only the option of providing you with
28 a yea or nay or somewhere along the scale?

1 So I think if the OEB is going to be exploring
2 customer survey and taking on that role, there are a number
3 of different areas that need to be evaluated and addressed
4 prior to going to a standardized approach.

5 MS. BRICKENDEN: For sure, Indy, and what I personally
6 noticed in looking at the literature and other company
7 surveys, it also depends on what is of strategic importance
8 to the company at a certain point in time.

9 As each company is going to be trying to assess what
10 its customers' value, that may not be the same for every
11 single company across the province. Not every single
12 company across the province has the same customer base.

13 So sensitive to the fact that each company will have a
14 different profile, so to speak, in terms of customers, and
15 also will be in a different place in its development or
16 strategic investment cycle, it may have to focus on
17 specific areas in order to get a handle of, putting little
18 quotes around it, customer satisfaction within that
19 context, that company's context.

20 I wanted to put that out there that a generic one-
21 size-fits-all may not be appropriate. Judy?

22 MS. KWIK: Judy Kwik for the Power Workers' Union. I
23 think in doing the customer service, it's really important
24 that the customers understand the context of the survey,
25 and I think that's probably best done through a
26 willingness-to-pay survey, which the Board has already
27 embarked on such an approach in the service reliability
28 consultation, which I think is a really good start, because

1 it provides the Board with the feedback on or an
2 understanding of what the customers need and what they
3 expect, which of course is the basis for the cost, as well
4 as reliability standards.

5 So I think a willingness to pay, as the Board has
6 already started doing, is the way to continue.

7 MS. BRICKENDEN: Thank you, Judy. Carm?

8 MR. ALTOMARE: Yeah. Talking about customer sat, it's
9 been my experience in using that measure, the scorecard,
10 it's very -- it's driven by perception of the customer of
11 the service. It doesn't necessarily reflect on the service
12 that is provided by the utilities, and that's why I would
13 encourage utilities to continue the customer sat surveys as
14 they have done traditionally, because they are very useful.
15 They do help pinpoint some of the weaknesses or some of the
16 areas for improvement.

17 But for a regulatory scorecard, I would promote the
18 use of the customer service metrics. There are some of
19 them that are in there that we are already reporting on on
20 an annual basis, and to me that would be more reflective of
21 a regulatory customer service metric than customer sat,
22 because of the points that were raised earlier. You know,
23 would you do a survey across the whole industry in Ontario?
24 And again, you have the different makeup of customers, you
25 have the different requirements by customers, and it
26 wouldn't be fair to make any comparisons from that
27 information that would help individual utilities or even
28 help the regulator.

1 So I would say continue with customer sat for
2 individuals, but let's look at more the customer service
3 SQIs that we already have.

4 MS. GIRVAN: Julie Girvan, Consumers Council of
5 Canada. I tend to agree with that, as well, and I think
6 another important consideration for any customer surveys is
7 timing. If you do a customer survey after you've had a
8 rate increase or commodity cost increase, that could
9 certainly reflect the results of the survey. So timing is
10 important.

11 MS. BRICKENDEN: Carm?

12 MR. ALTOMARE: One thing I did forget to mention was
13 that in Hydro One, we've started doing transactional-based
14 surveys. For example, when we connect a customer or
15 provide an upgrade or do forestry work or even the service
16 that we provide by our call centre, we have an agent that
17 goes out and surveys customers. It's just a very short
18 survey, but it's based on the service that we provide.

19 And to me, that's more reflective of how well we're
20 doing. And at the same time, we use that information to
21 improve that process, whether it be a connection or an
22 upgrade or forestry work or whatever.

23 So just to share that with you.

24 MS. BRICKENDEN: That's a good point. Actually
25 surveying the customer's experience at the time of the
26 moment of truth is very effective while it's fresh in the
27 memory of the customer, and it's less apt to be biased,
28 because they're not trying to scan back in their memory and

1 recall what happened.

2 MR. BAKULEV: Alex Bakulev from Toronto Hydro.

3 A question regarding cost-performance measures.

4 So we have three measures, and it seems like one of
5 those measures, which is, I believe, based on the
6 econometric model, kind of includes other two measures. So
7 econometric model I believe includes OM&A, that planned
8 cost, and then it's not just a per-customer basis; it kind
9 of considers other outputs of the utilities.

10 So the question is: Do we need three measures, or we
11 can just use one measure, which is a way better
12 representation of the cost performance of the utility?
13 What are your thoughts on that?

14 MS. BRICKENDEN: I'm sure Larry will fix me if I get
15 this wrong, but the efficiency ranking, so to speak, is a
16 bit of an all-in total cost metric. The individual
17 components, however, can be useful in looking at the
18 context for that efficiency ranking. So that you're
19 looking at the components at a high level that go into
20 establishing that ultimate.

21 MR. BAKULEV: Maybe do we want to consider not just
22 per-customer basis, but let's say per-kilowatt delivery,
23 right?

24 MS. BRICKENDEN: Possibly.

25 MR. BAKULEV: One of the station is that one customer
26 could be a high-rising building, which includes about 1,000
27 customers in. So a better representation could be kilowatt
28 deliveries, rather than just the customer basis.

1 MS. BRICKENDEN: Per customer, yeah.

2 MS. NANNINGA: Just on the ratio for net plant per
3 customer -- oh, sorry. Margaret Nanninga, Kitchener-Wilmot
4 Hydro.

5 As far as the net plant cost per customer, without
6 getting too deep into the ratios, I guess I have a concern.
7 Some utilities have a lot of transformer stations and
8 others don't have any, and so I think it could have a big
9 impact on measurability or comparability of that ratio.

10 MS. BRICKENDEN: Thank you.

11 Richard?

12 MR. STEPHENSON: Richard Stephenson for the Power
13 Workers' Union.

14 When you're looking at this scorecard, I think it's
15 important to take a step back and to realize that one of
16 the fundamental purposes of the scorecard is to incent
17 certain behaviours which the Board perceives as being good.

18 So you have to be mindful about the fact that like
19 standardized testing in schools and you wind up having kids
20 being taught to the test, you would expect a rationale
21 utility to perform according to the scorecard. So it's
22 just as important to understand what's not on the scorecard
23 as to understand what is on the scorecard, and because a
24 rational LDC would focus its attention on achieving good
25 marks on the things that are being scored, presumably at
26 the expense of things that are not being scored.

27 And so while it's critical that the Board be
28 mindful of its statutory objectives in terms of the things

1 that it's measuring, if that has the result of achieving
2 socially undesirable impacts, then that's a bad thing and
3 something the Board has to be mindful of.

4 So for example, one of the issues that was raised
5 earlier was employee and public safety. You don't really
6 see that in the Board's statutory objectives very much, but
7 it is entirely foreseeable that you have -- when you have a
8 whole lack of objectives and LDCs quite rationally pursuing
9 those objectives, something else has to give, and if
10 somebody can meet this list of objectives and the
11 consequence is that employee and public safety suffer, is
12 that really an outcome that the Board wants?

13 Same thing with environmental -- adverse environmental
14 impact.

15 I appreciate that there are other regulatory schemes
16 out there, but there's other regulatory schemes out there
17 about all of this stuff, or a very significant part of all
18 of this stuff that is governed in some fashion or another
19 by a variety of things.

20 So I just think the Board has to be very mindful of
21 the fact that what it's doing will incent behaviours and it
22 has to be conscious of unintended adverse outcomes.

23 MS. BRICKENDEN: Thank you, Richard. Judy?

24 MS. SIMON: Judy Simon from LIEN.

25 I have some comments on the measures, as well as on
26 the overall scorecard.

27 I wanted to say that LIEN's pleased to see the public
28 policy responsiveness addition. We would like to suggest

1 that there should be an addition to the performance
2 category related to LEAP. There's probably a ministerial
3 directive you could refer to, and at minimum, there's the
4 Board's own initiatives. I think that that's missing.

5 And the new amendments to the RRR certainly reflect a
6 strong interest in the Board in getting more granular about
7 the data, residential and low-income data, so I think that
8 should be reflected in the measures and then ultimately in
9 the scorecard.

10 As far as taking this a step further, it would be
11 helpful if the working group were to also consider
12 increasing the granularity of the reconnection service
13 quality indicator, to reflect the additional reporting
14 requirements related to the separation of residential and
15 low-income, for example. It might be worthwhile to know
16 the number of low-income arrears management programs that
17 are put in place with reconnection, versus the total number
18 of low-income reconnects.

19 Things like that might be useful to consider in the
20 working group, and then come back to the rest of us with
21 some suggestions.

22 In addition, there's -- as far as handling inquiries,
23 I agree with the point that was made about adding some
24 granularity as well as some precision to what those
25 inquiries and what those complaints are about. And to tie
26 those specifically to the categories and performance
27 outcomes would be helpful, because I'm quite aware that the
28 companies get all kinds of inquiries that they track that

1 don't really have any direct bearing on what's in their
2 control.

3 In that vein, it would be good to track, perhaps at a
4 greater granular level of detail, the CDM customer service
5 that a lot of utilities - probably most, if not all the
6 utilities - provide. Many of their CSRs spend a lot of
7 time dealing with customer inquiries and assisting with
8 programs that add value to customer service, and that's not
9 tracked separately and it may be of interest to the Board.
10 It links somewhat to public policy responsiveness, but
11 customer service wasn't directly flagged in the directive.
12 So that might be something to consider, as well, because
13 from the customer perspective there can be significant
14 value added there if the issues are handled properly. It's
15 not only -- this is for all customers.

16 And as far as the customer satisfaction survey -- do
17 you want me to keep going or did you have a comment on what
18 I was going to say, Colin?

19 MR. McLORG: Sorry. I was waiting for my microphone.
20 I was going to ask another perhaps rhetorical but hopefully
21 clarifying question, but it goes to fundamentals. What is
22 the difference between a discussion of reporting
23 requirements and a discussion of the scorecard?

24 There has to be some kind of difference between a
25 scorecard and a whole set of reporting requirements, and I
26 don't know what basis Board Staff or the Board might have
27 for distinguishing between what's conceptually eligible to
28 be on the scorecard and what is nevertheless of interest to

1 the Board and may form part of a reporting requirement, but
2 isn't part of the scorecard per se.

3 MS. BRICKENDEN: Well, I think the test that Staff
4 have been using in order to filter is envisioning a
5 pyramid, the bottom of the pyramid being: All in, all
6 comprehensive, what are the things that the Board will
7 effectively have in place to regulate the company? And
8 also in there, blended with that, but not necessarily the
9 Board's oversight, will be the things that also manage the
10 business, so it's kind of sliced in half, things that are
11 of regulatory nature, things that are of critical business
12 nature in serving the customers.

13 In the middle part would be the operation -- the next
14 level is the category where it's -- what are the key
15 operational, functional things that the business and the
16 regulator want to keep tabs on to have a handle on the
17 directional success of the company, and on the other side
18 are the more customer service centered type elements, the
19 more outward looking.

20 At the very top are the critical things that, quote,
21 might keep you up at night. What are the things, the hot
22 buttons so to speak, that are really -- I won't say safe
23 and sure, but generally we're confident that they are the
24 indicators of -- the true indicators of the success of the
25 business and that will give comfort to the Board that
26 everything is on track. It's a subset. It's not a case
27 that everything is going to fall away. There are
28 dependencies. There are maybe two words on a scorecard

1 that beneath that might have four data elements.

2 So there might still be that system relationship,
3 Colin, where there are going to be ongoing reporting
4 requirements that then are fed up into the scorecard, but
5 it's not intended -- the scorecard in and of itself is not
6 intended to be the full suite of the Board's regulatory
7 framework, and I do not anticipate that the codes are all
8 going to wind down and the RRR code will turn into four
9 bullets as a result of this exercise.

10 However, if at the end of this exercise we find that
11 there is information that it really isn't contributing to
12 the Board's regulatory oversight, it's not contributing to
13 what we think is measuring a distributor's effectiveness
14 and continuous improvement in the performance outcomes the
15 Board has identified, why should the utilities be reporting
16 it?

17 So there would be a rationalization at that point to
18 focus on the things that do matter. Does that help at all?
19 Colin?

20 MR. McLORG: I think that is helpful for me at least,
21 Lisa. What I understood from what you're saying is that
22 there would be a difference between what companies report
23 on as a whole and the subset of those things that would be
24 included in the scorecard. I also understood from what you
25 were saying that, you know, while it's true this might be
26 an occasion for the Board to look at what's being reported
27 and see whether that can be streamlined hopefully, and so
28 on, it's nevertheless the case there are going to continue

1 to be things that the Board is interested in, even just
2 from a policy or information perspective, a lot of things
3 perhaps to do with developments in, you know, low-income
4 service, and so on, or how many customers are fitting into
5 that category, without being directly part of a performance
6 scorecard.

7 I guess it is very difficult to say abstractly what
8 the difference between those two categories is or what
9 characteristics of a particular item make it eligible for
10 inclusion on the scorecard, but I just was concerned that
11 we not start with the implicit assumption that everything
12 that's now reported is somehow a candidate to be on a
13 scorecard, because I think a lot of those things represent
14 useful information to the Board, but wouldn't necessarily
15 go to performance, per se, of the utility.

16 MR. GUILBEAULT: Jeff Guilbeault, Peterborough
17 Distribution. I just wanted to make a general comment that
18 we should keep in mind the boundaries of the scorecard and
19 the boundaries of the OEB's jurisdiction, and I guess,
20 oddly enough, I would argue against putting safety on the
21 scorecard, because we do have other regulators that
22 regulate public safety, the ESA, for example, which is
23 actually enshrined in the Electricity Act, I might add.
24 Public worker safety, we have the WSIB. We have the
25 Ministry of Labour, under the Occupational Health and
26 Safety Act.

27 So I would caution against adding things that are
28 probably outside the jurisdiction and interest of the OEB

1 on the scorecard. And environment probably is the same
2 thing, too. We have the Ministry of the Environment. We
3 actually have two regulators. We have a provincial one and
4 a federal one.

5 So I don't think I would want to add OEB to that list.
6 That's my comment on...

7 Line losses I think is a good idea, but the other two
8 I'm not so fussy on.

9 MS. BRICKENDEN: Thank you.

10 MS. MCLORG: Lori McLorg, Veridian. Just in response
11 to that, I think the idea of raising safety, in particular,
12 it goes to what Carm was speaking about, a balanced
13 scorecard, that a utility has to balance out where it puts
14 its resources.

15 And if we have a scorecard that we are to follow and
16 to meet targets on, again, also, as somebody else pointed
17 out, you might get unintended consequences and you wouldn't
18 want to see that resources that the utility should be
19 putting into things like safety are not on the landscape
20 for things like rebasing for your cost structure for how
21 you run your business on a scorecard with the regulator,
22 because while there are other entities that deal with
23 safety, they don't determine how we run in our cost
24 structures and how we run our business.

25 So I think it would be an error not to have something
26 like that.

27 MR. GUILBEAULT: Just to further the discussion a bit,
28 safety is front and centre on our corporate scorecard, so

1 it's not going to get lost, and any good utility would not
2 sacrifice that just to please a rate-based regulator.

3 So I don't know that that's really a big issue. I
4 think it's still -- I think it's an important factor that
5 you would maybe use as evidence towards a rate case, but to
6 be on a scorecard seems a little out of jurisdiction in my
7 view, anyway.

8 MS. MCLORG: That seems a little bit contradictory,
9 that if it's good utility practice, should it not be on the
10 regulator's landscape? And if we feel that it is a key,
11 core business value when we would be putting it on our
12 internal scorecards, I think it should have some
13 consideration.

14 MS. BRICKENDEN: I think this is an important
15 conversation to have, because even Staff, when preparing
16 this, had a number of back-and-forths amongst ourselves.

17 We're not trying to supplant or replace the corporate
18 scorecard. We're not trying to create the be-all and end-
19 all and balanced scorecard for electricity distributors in
20 Ontario. Personally I don't feel that would be
21 appropriate. That's the purview of the company that will
22 have to -- that scorecard will of necessity evolve over
23 time, consistent with the company's strategy. That's what
24 happens to all of them. That's why the balanced scorecard
25 is such a beautiful tool.

26 Reporting in a similar fashion and aligning the
27 regulatory reporting and this scorecard or report card --
28 whatever might be a better term for it -- I think is

1 important that it be aligned and consistent, but does it
2 need to replace? Is it appropriate that it replace? Is it
3 appropriate that the Board try to say: Here are the things
4 that you, as a business, should focus on?

5 Maybe it's more important that the Board say: Here
6 are the things that are of a concern from a regulatory
7 standpoint. Here's how we think your effectiveness in
8 delivering to these outcomes is best measured, consistent,
9 hopefully, with how you measure yourselves and your
10 business.

11 And I think as Colin said, it's a subset, not the
12 replacement.

13 Others' thoughts on that?

14 MR. McLORG: I was simply going to add, to amplify or
15 to add to the points that have been made, that I think it
16 certainly is of interest to the Board and it certainly is
17 of interest to utilities.

18 Whatever it is that we do that has cost consequences,
19 cost consequences will be reflected on rebasing in revenue
20 requirements and cost consequences will be reflected in
21 cost performance, which is clearly of interest to the
22 Board.

23 So I certainly think that anything that has cost
24 consequences that are material would, sort of on a general
25 basis, qualify at least for consideration here.

26 MS. BRICKENDEN: Before I take any more questions, I
27 thought I would check in with Laurie to find out if
28 anything has come through via e-mail.

1 MS. KLEIN: Thank you. I have one question. It's
2 from Jim Huntington, Niagara-on-the-Lake.

3 He has a question on cohorts. His question is:

4 "Density of an LDC's distribution system will
5 have a major impact on OM&A. Our next closest
6 cohort has a customer density twice that of our
7 distributor, while the other three have multiple
8 densities. Will there be a better recognition of
9 the effective density as a cost driver in the
10 future?"

11 MS. BRICKENDEN: I'm wondering if we could hold that
12 question until Larry is presenting on the benchmarking, if
13 that is okay. If you could mark that one for...

14 MS. KLEIN: Yes.

15 MS. BRICKENDEN: Thanks, Laurie.

16 MS. KWIK: Another suggestion for another performance
17 -- Judy Kwik, Power Workers' Union. Another performance
18 measure if -- a measure of the distributor's readiness to
19 manage unforeseen circumstances. You know, I think about
20 storms like Sandy coming along, and this is a kind of
21 measure that if you leave it off might get sacrificed. And
22 it would be distributors showing their flexibility to
23 accommodate unforeseen major events.

24 MS. BRICKENDEN: Are you talking about emergency
25 preparedness?

26 MS. KWIK: Yes. I'm not sure how you score it, and
27 we'll have to have that discussion. I'm sure there's a way
28 of doing that.

1 MS. BRICKENDEN: Thank you, Judy. Jay?

2 MR. SHEPHERD: Yeah, I -- the question has been raised
3 by a number of people now, issues of how to reflect in the
4 scorecard distributor diversity. We've been sort of down
5 in the weeds talking about individual measures, but we
6 haven't stepped up to the higher level and said: Well, how
7 do we want to design the scorecard so that it achieves the
8 objectives?

9 If you're -- if you're doing comparisons just for
10 diagnostics to find out what the problems are, then you
11 don't really have to worry about making sure that every
12 metric is fair, because each metric is telling you a
13 different thing.

14 But if the scorecard has consequences, which
15 presumably it will, then you have to -- then fairness
16 matters. And it seems to me that there are three ways that
17 you can reflect distributor diversity, and I'm trying to
18 prompt a discussion about this.

19 One is you can design metrics so that they adjust
20 already, so that a metric of OM&A per customer already
21 factors in things like density and stuff like that, or
22 customer mix, let's say. Or you can choose enough metrics
23 that if you're hurt on one, you'll be helped on another, so
24 you add things like cost per kilowatt-hour. Or you use
25 cohorts, comparator groups, to ensure that you're only
26 comparing people with -- or utilities with like utilities.

27 All of these have advantages and disadvantages, and
28 I'd be interested in hearing people's views on how that

1 should be done.

2 MS. BRICKENDEN: Thank you, Jay. Maurice?

3 MR. TUCCI: It's Maurice Tucci, EDA.

4 I just wanted to flag that. We did have some
5 discussion about these things, net plant per customer, OM&A
6 per customer, and Jay's right. There are differences
7 between utilities, and there'll be a lot of difficulty
8 trying to make direct comparisons between utilities using
9 these measures.

10 We recognize that these measures are relevant, I
11 guess, in terms of comparing us to other jurisdictions,
12 because they are measures used in other jurisdictions. So
13 they're sort of relevant. And OM&A and net plant are -- as
14 long as you have both of them there, you're sort of
15 capturing the trade-offs between them.

16 But we were struggling, trying to figure out how to
17 make these better, like Jay's suggestion. It starts
18 getting into a benchmarking exercise then, and we fall into
19 that trap of having a number that doesn't compare to any
20 other jurisdiction anymore.

21 Are we going to keep these numbers so that we can
22 compare it to other jurisdictions, and then put a little
23 asterisk and say: But, you know, you allowed the utility
24 to explain why its net plant maybe is higher or lower,
25 because we all know utilities have different age of assets,
26 different densities. There's a lot of things that are
27 making them not directly comparable. But if you -- if you
28 average it across all the utilities, it might be a relevant

1 number, a weighted average across all the utilities, but by
2 itself when we're trying to compare between them, it's
3 problematic. And then the LDC might have to put a footnote
4 and explain: Well, I know my costs are higher or lower
5 because of this reason.

6 MS. BRICKENDEN: That actually might be a good segue,
7 if I may, to quickly jump ahead to the slide that discusses
8 that as a feature of providing the context for the
9 information provided to the Board and published on a
10 scorecard. If that's okay with folks, because this does
11 delve into some of the questions we wanted to get at the
12 end of this slide presentation. Gia?

13 MS. DeJULIO: I would be remiss if Enersource didn't
14 thank Jay for his suggestion there, because certainly we
15 are on the record as to our frustration with the current
16 measures, because they penalize some LDCs who may have a
17 very large throughput and a relatively smaller number of
18 customers.

19 So if there is -- if we're opening up the discussion
20 to including other types of metrics, such as total dollars
21 per throughput and different metrics, obviously we're very
22 amenable to that.

23 MS. BRICKENDEN: Definitely. Yes?

24 MS. YAMPOLSKY: I have two probably technical
25 questions. Well, one is really -- if one of the purposes
26 of the balanced scorecard is to incent some behaviour by
27 utilities, I personally was a little bit surprised to not
28 see here anything related to smart grid, which is

1 apparently very important. So I wonder whether there was
2 any reason to not include anything related to it, other
3 than the fact that we still don't know how to measure it.
4 That's probably point number one.

5 Second one, it is really everything here, all these
6 measures, they're point-of-time measures. Again, except
7 maybe to some extent efficiency ranking, I don't see any
8 measure of trend.

9 Now, internally we would say our growth over the
10 years, or cost performance over the year. Again, I don't
11 see it here. Any thoughts about this?

12 MS. BRICKENDEN: Yes. Lucky Brian left the room as
13 you asked about these. However, the Board in the October
14 18th report has determined that the smart grid investment
15 activities are to be treated as regular run of the mill
16 capital investment activities. So good observation. No,
17 we have not explicitly put a smart grid element on the
18 scorecard, but it will be an important component in the
19 distribution network investment consultations that are
20 going on right now, and something might come from that
21 under the asset management category. So, no, we do not
22 have anything yet.

23 With respect to point-in-time and trend, you are
24 correct. In the Staff proposal, however, just jumping
25 forward here, we have proposed a relatively simple
26 presentation of the scorecard. There is a larger copy of
27 this small graphic image hopefully in your package that we
28 issued on -- I think it's printed off on a legal 11-by-17.

1 We do propose presenting five years, the five most
2 recent years of information, in order to reveal the trend,
3 and we have also -- while it's very hard to see at the
4 bottom of this slide, we are proposing that there be
5 something on the scorecard to provide an indication of what
6 the direction is, how the direction is -- performance is
7 pointing, whether it's keeping steady, it's increasing or
8 decreasing.

9 Hopefully, there will be a trend and it would be the
10 most current five years. Staff proposed five to align with
11 the Board's policies, as set out in the report, to move
12 towards a five-year rate-setting cycle and the five-year
13 investment planning cycle.

14 And, in addition, just leveraging off of Maurice's
15 comments, Staff have also, on the next slide - I believe
16 it's slide 11 - provides a brief summary of the key
17 features of Staff's proposed scorecard.

18 A number of distributors have expressed concern in
19 consultations to date that it's important to understand the
20 full context of what the distributor is reporting at any
21 point in time.

22 We've included in our proposal kind of a management
23 discussion and comment section. And I have found that this
24 does exist, generally speaking, in the corporate scorecards
25 that I've seen, so it's not unusual.

26 One thing that I would like to put a bit of a pitch in
27 at this point, if you will bear with me, it would be really
28 helpful to our working group if there are some of you in

1 the audience here or even out listening across the province
2 if you would be willing to share with us what's on your
3 scorecard. What is it that your board is asking you to
4 keep an eye on? It would be helpful for us to have a few
5 samples to work with in the working group.

6 We will be asking the utility members to share, but if
7 there are others that would also be willing to share, it
8 would be helpful to us. And not many publish them, because
9 I do understand that they are internal company documents.

10 MR. HARPER: It's Bill Harper. Because I'm part of
11 the working group, I think I would be interested in that,
12 but also particularly interested in terms of if you have a
13 scorecard, not only what's on it, but more precisely how
14 you measure it. What is the measure that you use? Because
15 that's probably particularly interesting as we get down to
16 the nitty-gritty of it?

17 So I'd really encourage response to what Lisa is
18 saying. Not only what is on it, but also how it's
19 measured, as well, would be really useful.

20 MS. BRICKENDEN: Colin?

21 MR. McLORG: Lisa, a couple of remarks responding to
22 what you just said and concerns that Jay raised.

23 I'm speaking only for myself here, because we haven't
24 had a complete chance to digest and discuss all this, but
25 it did seem to me - and maybe I took this as an unconscious
26 assumption - that this scorecard per se would mostly be a
27 tool for the Board to assess a utility's own performance
28 relative to its history, and that the problems that Jay

1 raised and Maurice mentioned, and other people have
2 mentioned, concerning the comparability of scorecard
3 results weren't really meant to be addressed in the
4 scorecard, per se, or within that context, but would be the
5 subject of the analysis that goes on as far as
6 benchmarking, and so on, is concerned, where you actually
7 have cost drivers and explanatory variables, and so on.

8 I see what your point is concerning the MD&A, but to
9 me that would be a vehicle in which a company could
10 describe trends, as it does in its own financial
11 statements, year over year or discuss extraordinary
12 developments that occurred in the current period, or
13 whatever.

14 But I'm not aware that anyone's MD&A contains any
15 discussion, in the financial statement context, of why
16 certain costs are at a level that's either higher or lower
17 than someone else's. All the MD&A material is exclusively
18 self-referential. So I'm just really mentioning that in my
19 unexamined assumption, I had thought that the benchmarking
20 analysis, the cohort analysis and all that whole branch of
21 the discussion, would go to issues around comparability
22 between utilities, whereas the scorecard would be an
23 indicator for the utility itself, because it is virtually
24 impossible, in my opinion, to adequately correct in a
25 summary way the differences that would exist between Hydro
26 One and Newmarket Hydro, or whatever.

27 MS. BRICKENDEN: I understand. And just getting back
28 to something Jay commented on previously in getting the --

1 and we don't know yet, so I wish I had an answer for you,
2 Colin, but we need to discuss this in the working group,
3 because it would be ideal if we weren't going to be
4 creating excess metrics that aren't multifunctional.

5 If a metric can be used multi-purposed, that would be
6 great; i.e., first, it might be used in an application to
7 estimate a trend level from one year to the next; secondly,
8 gee, that is a good one, therefore, to report annually on
9 the scorecard.

10 We don't know. I'm just giving you an example.
11 Thirdly, that exact same metric can feed into our empirical
12 analysis that Larry is doing. We don't have to create a
13 new number for Larry. I would hate to have our empirical
14 analysis, the work that we do to actually do efficiency
15 rankings, rely on inputs and assumptions that are derived
16 differently than what the Board is going to be using to
17 inform itself in the context of an application or on annual
18 reporting.

19 So from system standpoint, I think there's benefits to
20 having consistency there. With respect to scorecard-to-
21 scorecard comparisons, I think I agree with you that right
22 now, until we have a more detailed discussion on what are
23 the components and how -- as Bill pointed out, how are the
24 individual measures actually derived and estimated, the
25 \$6 million question is number 8.

26 One of the things we've been skirting around a little
27 bit is report cards will say you got an A or a B or a C, or
28 your number is 3.5, 25.6 or whatever. There is no

1 averaging. There is no scoring, per se. It just is an
2 objective report of data and each data element may have a
3 time series.

4 As soon as you start aggregating that information
5 together and trying to assign meaningful weightings to it -
6 and this gets a little bit to, I think, what Andrew was
7 saying earlier - that's very complex. And I don't know yet
8 if we're going to go there, Colin. I think it's too early
9 days, but on the working group we need to explore that. If
10 we do, how do we do that? How do we do it consistently and
11 fairly? Or, as Andrew pointed out, is it something that
12 perhaps the utility would assign based upon its own
13 circumstances and just report it to the Board so that it
14 would be consistent year over year for that utility?

15 MR. McLORG: Just a couple of quick responses, Lisa.
16 I didn't, first of all, mean to suggest that the
17 information used for the scorecard and the benchmarking
18 needed to be exclusive in any way, or that it wouldn't be a
19 benefit to have everything calculated on a uniform and
20 consistent basis. I didn't mean to suggest that.

21 Secondly, I think it's our view -- and I'm aware that
22 other utilities feel this way, as well -- that there
23 certainly needs to be weighting of the individual items on
24 the scorecard to reflect their relative importance. I
25 think that's a very different question, and I agree with
26 you that that would be a very demanding and judgmental
27 exercise.

28 But I think that's a very different question than the

1 one that is involved with somehow comparing one utility's
2 scorecard to another utility's scorecard. And I don't
3 think it would be meaningful, for example, to take -- to
4 show on any scorecard what the average score across the
5 province was, because that would basically be to disregard
6 the benchmarking of the analysis.

7 MS. BRICKENDEN: Jay?

8 MR. SHEPHERD: I actually agree with Colin. Did I say
9 that?

10 [Laughter]

11 MR. McLORG: Mark the date.

12 [Laughter]

13 MR. SHEPHERD: Yes. But I guess I think that
14 inevitably scorecards will be compared with each other, and
15 I'm not just thinking within the regulatory process. Your
16 own boards of directors are going to ask to see the
17 scorecards of other utilities that they think are
18 comparable, and then they are going to whack you around if
19 they think you're not performing up to the peers.

20 This is going to happen. Once you have a standardized
21 rating system that's approved by the regulator, people are
22 going to use it. Customers, your boards of directors, your
23 internal management; it's going to be used by lots of
24 people.

25 So I think we have to anticipate that and make sure
26 that the final result is not as easily open to mistakes and
27 abuse. That's my -- I'll give you an example.

28 Is there any reason why the scorecard can't have a

1 measure of utility attributes? Things like a density
2 measure, things like a transformer ownership measure, where
3 you segregate out the transformer ownership component of
4 capital measures, things like a customer mix table. These
5 are all simple things to do, and I think you might be able
6 to get a package that would give you a general description
7 of what type of utility this is.

8 I'm putting that out as a possibility.

9 MS. YAMPOLSKY: I actually agree with Jay. As much as
10 we think all this is not comparable and utilities are
11 different, our board of directors, our executive management
12 would ask us: Can we see what Enersource is doing? Let's
13 see Enersource compared to PowerStream, what Toronto Hydro
14 is doing. We are going to be there.

15 But I think that aggregate performance is actually --
16 would be a really misleading indicator, because at any
17 point in time the relative importance of whatever it is,
18 safety versus reliability versus financial measurement, it
19 will be different for each utility. And then as much time
20 as working group will spend on actually saying five
21 percent, 10 percent, 11.5 percent, we will spend all this
22 time and it's not going to be relevant for decision-making.
23 And that's what we will want to have at the end of the day.

24 MS. BRICKENDEN: Thank you. Patrick?

25 MR. HOEY: Lisa, Patrick Hoey from Hydro Ottawa.

26 My experience also is that when weightings do occur,
27 they vary year-to-year, periods of time, based upon the
28 priorities that occur within the companies.

1 Even the same company will, over a five-year period,
2 have different weightings between markers, so the
3 comparability of one scorecard in one year to the next may
4 not be as simple as people think it would be. It may not
5 be there.

6 MS. BRICKENDEN: Thank you.

7 Indy?

8 MS. BUTANY-DESOUSA: As a follow-on to Patrick's
9 comments, then, it begs the question on the trend analysis.
10 I know you identified upfront that it's simplistic, but it
11 begs the question: Are you looking at the LDC and its
12 trends over the five-year period in aggregate? Are you
13 looking on a year-over-year basis? And then obviously you
14 need to tie back to the particular target, in any event,
15 that's in your extreme right-hand column, and how the
16 utility is doing relative to that target.

17 MS. BRICKENDEN: Actually that raises another point,
18 Indy.

19 On our proposed scorecard at this point in time, we
20 have only identified explicit targets where the Board has
21 established a specific target in its Codes.

22 What are folks' thoughts on what might actually -- or
23 should anything go in there, if it isn't something that the
24 Board has established?

25 Andrew?

26 MR. SASSO: Andrew Sasso from Enwin.

27 I think that everything on a scorecard needs to have a
28 target, and I think that everything -- you know, otherwise

1 you don't know what you're working towards, and different
2 utilities should be working towards different things.

3 And I think when that comparison is done between
4 utilities, it will be with reference to the target. No one
5 would expect to have the kind of -- let's say, because
6 Colin walked out -- capital plan targets as Toronto Hydro.

7 [Laughter]

8 MR. SASSO: Seriously speaking, you just wouldn't
9 expect that at a lot of other utilities. And that's okay,
10 and that's for the Board and Toronto Hydro and intervenors
11 to work out in Toronto's proceedings, to set that target.
12 They already do it when it comes to rates, and I would
13 expect that they would do it with respect to -- translate
14 that into scorecard criteria for the next five years or
15 whatever, whatever the period is, and I think that's quite
16 legitimate.

17 And that's why I think it's very important to have
18 LDC-specific targets, because when you come with some sort
19 of aggregate, the target is it going to end up being too
20 low, let's say, for Toronto Hydro, or too high for Enwin,
21 or too high for Enwin and too low for Toronto Hydro.

22 And I don't think that's helpful for the ratepayers in
23 those actual communities. It may be helpful from some type
24 of aggregate, large-scale comparison purpose, but in terms
25 of actually ensuring that distributors are delivering value
26 for customers in their communities, I just don't think that
27 kind of aggregate targets are all that meaningful.

28 What will happen over time, of course, through -- as

1 with anything, is that a general trend will emerge. For
2 the most part, utilities will generally have a pointy
3 target or a 300 target or whatever the metric is. And
4 we'll all get used to what that general expectation is over
5 time, and that will become the informal starting point for
6 discussion during any type of a target-setting process.

7 So I think there is some efficiency there. I don't
8 think it's going to be chaos forever. I think you grow
9 into it, you develop an expectation, but I would be -- I
10 very much encourage the Board not to establish a universal
11 target for everybody, for those reasons.

12 MS. BRICKENDEN: Thank you, Andrew.

13 Jay?

14 MR. SHEPHERD: Just to follow up on that, Andrew, it
15 sound like you're suggesting -- and I may actually be
16 saying this is a good idea -- that part of the rebasing
17 process should include not just setting the rates for one
18 year, but setting the metric targets for various metrics
19 for the five-year period until next rebasing. Is that --
20 there is an obvious regulatory burden question and a
21 regulatory cost question associated with that.

22 MR. SASSO: I think if we're going to do it anyway,
23 the best time do is during cost of service. And I can't
24 think of any better time to do it.

25 Obviously, a utility -- as I said in my opening
26 comments -- a utility who is on annual IR, this presents an
27 issue. But I think it's no different in some ways than the
28 -- I'm not going to pretend to understand it completely,

1 but the asset management plan filings. And you're
2 developing a capital plan on a five-year term. You've got
3 an IRM cycle that is, I believe, five years, and you've got
4 custom IR that again, I believe, is designed to be a five-
5 year customized rate-setting plan.

6 So I think for an awful lot of utilities, that five-
7 year horizon makes sense, and your OM&A is being set
8 essentially having regard to that five-year period. Your
9 capital is being set for that five-year period,
10 essentially.

11 So then you're tying your outcomes with the money you
12 actually need to achieve the outcomes, which I think is
13 extremely critical.

14 MS. BRICKENDEN: Thank you, Andrew. Judy, and then
15 Carm.

16 MS. KWIK: Judy Kwik for the Power Workers' Union.
17 This issue of targets tells me that maybe the financial
18 ratios in here that I use as performance metrics are not
19 appropriate on the scorecard.

20 Patrick earlier mentioned a corporate scorecard
21 relative to the regulatory scorecard, and this is something
22 I'm sure the shareholders would be very interested in.

23 But as measures on the regulatory scorecard, I think
24 we need to discuss how that actually fits.

25 MS. BRICKENDEN: Carm?

26 MR. ALTOMARE: Going back to -- I'm not sure who
27 brought this up, but the scorecards, and then benchmarking.
28 In my mind, they're not separate, in the sense that when

1 you're doing the scorecard, you're having to establish
2 targets, and how do you go about establishing those
3 targets? There are several ways.

4 One of them is benchmarking. For example, how do you
5 compare with comparable utilities in these different areas
6 that you're tracking in the scorecard?

7 So you would be doing benchmarking to see who's out
8 there, who is comparable and how they're performing. And
9 it would encourage you to discuss with, let's say, these
10 utilities that are doing better than you in the different
11 areas, to see why they're better. What practices do they
12 have? And ultimately see if those practices can be
13 implemented locally.

14 For example, there are some practices you can
15 implement for collective agreement purposes, but some you
16 can't. So what's the impact on your performance by
17 implementing these -- some people call them best practices,
18 some people call them improved practices. But, in any
19 case, benchmarking is a tool in developing your scorecard,
20 and, more particularly, not just the measures, but also the
21 targets.

22 And so it's a very important point in the sense that
23 you want to look at your traditional performance and
24 compliment yourself that you're improving. Year over year
25 you see improvement, but when you look at the comparable
26 utilities, you're a poor performer, and it doesn't sit
27 right with the board of directors, at least in Hydro One,
28 because we're being challenged continuously, you know, Is

1 that target best in class or is that target going to help
2 us achieve best in class five years down the road?

3 So that's why benchmarking is an important tool. And
4 I know several people around the table are very frightened
5 of benchmarking, but, in essence, benchmarking is a tool
6 that's used in a lot of the service industries in North
7 America and internationally.

8 So that's how you learn on how others are doing. And,
9 in my mind, the simple principle is stealing from the best.
10 That really is what benchmarking is all about.

11 I don't think they're separate, but how we work that
12 out I think will be interesting in the working committee.

13 The other thing I just want to bring up, I know I
14 didn't provide input on the scorecard. In the OM&A cost
15 per customer, I think we need to give consideration to OM&A
16 per asset, and also maybe look at the size of the assets,
17 like the asset management, maybe looking at a cost per
18 kilometre or a cost per asset, not just looking at
19 customer, because I think it may give the wrong message
20 depending on the makeup of the utility.

21 And a comparison about comparing Toronto to Hydro One,
22 I don't think that would be a worthwhile comparison for the
23 simple reason we're totally different utilities, and I
24 think the OEB has properly identified Hydro One as being
25 much different or unique, and we would be doing comparisons
26 outside of Ontario.

27 MS. BRICKENDEN: I might check again with Laurie. Are
28 there any questions online? No? Andrew?

1 MR. SASSO: Just a question, Lisa. Is there any talk
2 about doing comparisons for other utilities outside of
3 Ontario? I don't say that to take away from Hydro One, but
4 is there any thought, not necessarily -- whether it's for
5 benchmarking or scorecarding or target setting or what have
6 you, to saying, Okay, here are other municipally-owned
7 utilities in the United States, what have you, and
8 investor-owned utilities in the United States, but ones of
9 comparable size, comparable service areas or anything.

10 I'm not saying it as a definitive thing. I know
11 people get freaked out. I'm not saying that this is going
12 to -- you know, but there are Ontario nuances. I'm just
13 curious if that's part of the discussion.

14 MS. BRICKENDEN: At this point, no, we don't
15 anticipate actually doing jurisdictional comparisons of
16 companies and to establish targets. At this point, we're
17 looking at trying to establish a framework, and we will
18 learn from other jurisdictions best practices in
19 scorecarding and maybe what measures are in place, but not
20 specifically their performance. Do you know what I mean?

21 MR. SASSO: The reason I raise it is I note -- and I
22 mentioned this with some of my EDA colleagues. Many of us
23 who sent crews down to the east coast during the Sandy
24 storm observed, aside from the storm's effects,
25 infrastructure that was built to very different standards.
26 That is the case in Ontario.

27 We've done things with a neighbour to the north of us
28 who is in a different country, and we've observed the same

1 sorts of things in their system. That's a two-million-
2 customer utility that comes over and looks at our system to
3 find out, Wow, these are really leading-edge technologies,
4 you know, things we put in place 15 years ago.

5 So I just raise it because I think there has been some
6 comment, even I believe in the distribution sector review
7 panel, about the quality of Ontario's infrastructure
8 relative to a lot of other jurisdictions. And to the
9 extent our targets are continually pushing us higher, maybe
10 that's good, but in an era where we're very concerned about
11 rates, there is obviously a trade-off that has to take
12 place.

13 And maybe when we're looking to compete with
14 international jurisdictions for economic development, and
15 so on, having some sense of whether or not we need
16 reliability to five 9s after the decimal point or whatever,
17 whether that's really a reasonable standard, even if it's
18 the logical outcome of continuous improvement or referring
19 to ourselves within this jurisdiction.

20 MS. BRICKENDEN: Thank you, Andrew. Judy.

21 MS. KWIK: Judy Kwik, Power Workers' Union. Can I
22 just repeat the need for willingness-to-pay studies. Thank
23 you.

24 MS. BRICKENDEN: Thank you, Judy. Are there any other
25 observations or comments, questions? Patrick?

26 MR. HOEY: Patrick Hoey from Hydro One. Just back to
27 the scorecard elements. I just have one question for Board
28 Staff, and it was on the profitability. You had a

1 financial statement rate of return on equity and a
2 regulatory rate of return on equity as two different
3 measures.

4 I guess my question to Board Staff was: What's
5 different between the two of them?

6 MS. BRICKENDEN: Could I ask perhaps Duncan Skinner to
7 take that question, please?

8 MR. SKINNER: The utilities asked us to adjust the
9 interest component and adjust the after-tax impact of the
10 difference in interest in the regulatory calculation of
11 ROE.

12 In the yearbook, we divide the net income reported to
13 us by the equity. The utility said that wasn't fair and
14 wasn't reflective of their performance on a regulatory
15 basis, and that's why we have both.

16 MS. BRICKENDEN: Thank you, Duncan. Any other
17 comments or questions?

18 MS. GIRVAN: I had a question - Julie Girvan - for
19 Carm. How do you measure OM&A cost per asset? What does
20 that give you?

21 MR. ALTOMARE: The concern I had with OM&A per
22 customer is the point that was the raised in Toronto.
23 Like, a customer may be a huge apartment block and that
24 just counts as one, but in their costs to maintain that
25 connection, it costs a lot of money; for example,
26 maintaining underground cables or maintaining several
27 feeders.

28 So to me, it's questionable why you would go to

1 dollars per customer. Whereas if you go for dollars per
2 asset, it incorporates all the assets that are required to
3 service customers, and those assets would not only include
4 the stations, but also would include the lines, either
5 overhead or underground or submarine or -- and that would
6 be, in my mind, more indicative of trying to see how much
7 OM&A are we spending on an annual basis to maintaining and
8 operating those assets, as opposed to customer.

9 And then when you get into the rural business, you
10 could use assets, but to me, if your programs are being
11 managed by some attribute like distance, then OM&A per
12 kilometre for a rural utility would be more indicative.
13 And you could also use it for urban, but we're not there
14 yet.

15 And that's why, when you look at these denominators,
16 what is better in monitoring your performance.

17 MR. COWAN: It's Allan Cowan for Hydro One.

18 I think that's what Jay was referring to, is some of
19 these additional measures that may be required to help or -
20 specific unique characteristics of the various LDCs.

21 MS. YAMPOLSKY: Elena, PowerStream.

22 Just coming back to the target definition, I'm looking
23 back at the scorecard. So most of these measures, they
24 already have the targets defined, either by Distribution
25 System Code or by -- essentially, that's already defined.

26 As for cost performance, I really don't see Board
27 Staff sitting and telling us: Oh, you guys have to be
28 number four in efficiency cost ranking, or you have to

1 achieve \$215 per customer, or for whatever it is.

2 I honestly think it would be more practical to let
3 utilities define their own target, put it on the scorecard
4 -- just a thought -- and actually measure how the utilities
5 are moving towards the target simply will be more
6 practical.

7 MS. BRICKENDEN: Thank you. Jay?

8 MR. SHEPHERD: My understanding of where Andrew was
9 going and I think I agreed -- and maybe you're saying the
10 same thing -- is that on rebasing, a utility could come in
11 with proposals for what their target should be over the IRM
12 period, for example, the five-year period.

13 And the Board could then assess and say to the
14 utility: We don't think you're being aggressive enough.
15 Or: We think you're being too aggressive, and it's not
16 realistic.

17 But it would start with a proposal from the utility,
18 where they think they should go with their various cost
19 measures. That makes a lot of sense. You do it internally
20 anyway, right?

21 MS. YAMPOLSKY: Yes, that's true. I do agree with --
22 I really don't want this one to be just, you know,
23 additional issue on cost of service application. Is your --
24 I already can see it. Is your target on balanced scorecard
25 appropriate? And spending another half a day on this one.

26 MR. SHEPHERD: It won't be half a day. That's the
27 issue I was raising with Andrew. It wouldn't, in fact, be
28 half a day. It could be quite complicated, at least at the

1 beginning, until we start to get a sense of what -- of the
2 sort of standards that make sense.

3 MS. BRICKENDEN: Andrew? And then Jane.

4 MR. SASSO: It will add to the process, but it's part
5 of what's happening now anyway. We've had a discussion for
6 at least a year on the topic of regulatory framework, about
7 going to a model that's more about value and less about a
8 cost focus.

9 And if we're going to focus on value, and we're very
10 much behind that, you have to talk about what you're
11 getting for the money. That's what value is.

12 So when we get a Board decision and it's knocking us
13 down by a certain amount for OM&A or approving a certain
14 increase to enable capital expenditures, there is something
15 that goes behind that, which is the actual service that's
16 going to flow from the money that's actually being
17 provided.

18 So I think it's already happening. We're just not
19 very explicit about it in our process, about saying here is
20 what's going to happen. It's often part of the
21 application. It's always part of the submissions, saying:
22 If you give us X amount of money, here is the consequence
23 in terms of the service. Even in a settlement agreement,
24 you have to talk about: Okay, if you're agreeing to less
25 money, here's how you can still manage within that context,
26 and here's the things you'll do and the things you will no
27 longer do.

28 And all we're now saying is here is the impact on the

1 target itself. So it is more work. Nobody -- inherently
2 you don't want more work, but the benefit is now you can
3 actually have a more holistic dialogue, I think, during
4 cost of service.

5 MS. BRICKENDEN: Thank you, Andrew.
6 Jane?

7 MS. SCOTT: Similar -- further to what Andrew is
8 saying is if we're moving to a more outcome-focussed
9 approach, that, yes, in the cost of service the focus will
10 be on the scorecard and the outcomes, as opposed to getting
11 down into the details of what we're spending every cent on
12 so that there will be some saving.

13 To me, it's a shift in focus; it's not adding to the
14 cost of service work.

15 MR. BAKULEV: To add to the discussion, I'm kind of --
16 I'm thinking that we have these targets. The question is
17 how we're going to use these targets.

18 Is it for incentive rewards, or just for comparison?

19 So we need to think about that. Just to have a
20 target, it's not enough. Just to set this target is not
21 enough. We need to know what's -- further out, what we're
22 going to do with that.

23 MS. BRICKENDEN: That gets to the Question No. 5 that
24 is up right now:

25 "Do existing consequences associated with the
26 proposed measures continue to be appropriate?
27 Why or why not?"

28 MR. BAKULEV: I guess there is only one consequence

1 right now. It is with this efficiency ranking, right?
2 Whether we have 0.2, 0.4 or 0.6 percent reduction in cost,
3 what are other consequences? Just lose the license, right?
4 That's another one.

5 MS. BRICKENDEN: Or a compliance process. Jay?

6 MR. SHEPHERD: Just responding to Andrew, and one
7 thing I don't think we should miss here is that if rebasing
8 included approval of targets, it allows the Board a more
9 nuanced way of sending messages to the utility.

10 Right now, all the Board can do is say: Yes, you can
11 spend this much next year. Or: No, you can't; you can
12 spend this much instead. And the Board can make comments,
13 but it can't actually get down into the details of what
14 direction should you be going in.

15 By allowing some target-setting in that process, it
16 would allow the Board to send a more complex set of
17 messages to the utility, and it might indeed allow the
18 Board to say: We're not going to whack you back as much on
19 your OM&A this year, but here is the target you should be
20 going after, and next time you come in for rebasing we're
21 going to be looking at whether you achieved it.

22 So it might actually benefit some utilities that have
23 a bigger challenge to address.

24 MS. BRICKENDEN: Andrew?

25 MR. SASSO: There are presumably utilities out there
26 who have very low rates, who have very low levels of
27 service or very low levels of investment in their system,
28 and that's a concern and that needs to be addressed.

1 The punishment -- to your point, Jay -- of having a
2 utility getting knocked financially, it just doesn't work
3 in that context. It's doing the opposite of what you need
4 to do. So I think it becomes very convoluted.

5 I'm presupposing, probably inappropriately, but I
6 think it would be very difficult as a Board member in
7 crafting a decision to send a message to a utility when
8 service is low but rates are low. And the consequence is
9 that you need a rate -- a further rate increase in order to
10 deal with the problem and the target says -- we're really
11 going into the meaning of section 1.1 of the OEB Act,
12 clause 1 or whatever it is, that talks about performance as
13 opposed to point 2, which is about the financial component.

14 MS. BRICKENDEN: With the move to the multi-year -- a
15 move or more aligned with a multi-year planning and with
16 the work that is going on right now with Stephen Cain's
17 consultations, I like to think of it as making the
18 commitments in planning, keeping the commitments in
19 executing, and the scorecard will capture or could capture
20 those commitments that the company has made and on which
21 the Board has made -- approved certain approvals into
22 rates, and the scorecard will then be used to demonstrate
23 the achievement and keeping of those commitments.

24 I don't mean to oversimplify it, but I know that the
25 devil is in the details, but at the same time I'm a little
26 uncomfortable with discussions on targets if it's left --
27 if people leave the room thinking the targets established
28 on a scorecard on day one are fixed there in cement for

1 five years. I don't know as a business person -- and,
2 again, I'm going to say like Andrew, maybe I'm speaking out
3 of turn here, but as a business person, I don't know if
4 that is a reasonable proposition to make.

5 Business doesn't work that way. But once a commitment
6 is made, there is the expectation that you will endeavour
7 to keep that. On an ongoing basis, the scorecard operates
8 as a tool to track that or to monitor that. Judy?

9 MS. KWIK: Judy Kwik for the Power Workers' Union.
10 Isn't the intent of the scorecard actually to recognize
11 that performance of all these measures is an integrated
12 phenomenon? Rather than trying to set targets on the
13 individual measures or the aggregate scorecard, isn't it to
14 assess performance in an integrated manner?

15 MS. BRICKENDEN: That's a good point, a more holistic
16 view of --

17 MS. KWIK: That's what we need. They are related, so
18 you have to look at them together, right?

19 I think that's a good use of it.

20 MS. BRICKENDEN: Bill?

21 MR. HARPER: Bill Harper. I just wanted to sort of --
22 I'm sure a couple other people in the room here are on --
23 are participating on Stephen's work group, and I just
24 wanted to reiterate the point that you just made, that one
25 of the issues we're struggling with is that one can put
26 together an asset plan for five years, but to think that
27 asset plan is going to be the same for that -- is going to
28 actually hold for five years is probably a very optimistic

1 assumption.

2 How do you allow for legitimate flexibility or a
3 little bit -- changes in asset plan. That's one of the key
4 issues we've actually been struggling with. I just wanted
5 to mention that, because if you think of how this is going
6 to tie into five-year plans for scorecards here, I think it
7 is an issue.

8 Think of it as a road map, but as you get traffic
9 reports as you're travelling, you maybe have to change your
10 route as you go on your destination. Exactly the same
11 thing with asset management plan. As you get updated
12 information, you may have to change your route as you go
13 towards what may be a broad objective, but how you get
14 there may be different.

15 MS. BRICKENDEN: Thank you, Bill. Carm?

16 MR. ALTOMARE: To Judy's question, when you look at
17 the balanced scorecard, there is integration between the
18 different performance areas. And the reason why the
19 balanced scorecard works so well is that some utilities are
20 more focussed on cost, so they're trying to drive their
21 unit cost down.

22 But if you look at the balanced scorecard, driving the
23 unit cost down superficially will impact on the service to
24 the customer. So it will come across in the service
25 indicators. It will certainly come across in the
26 reliability indicators.

27 But having said that, it is very important to
28 establish targets for all the different strategic areas and

1 monitor individually, but realizing that they are
2 integrated, realizing that one has impact on the other.

3 And a good example is also safety. I use safety as a
4 bellwether metric when I'm comparing to other utilities,
5 because in my mind a utility that does very well in safety
6 is doing very well overall. And that's why, if you're
7 trying to also reduce your unit costs, you may see some
8 implications on your safety. So I hope that helps.

9 MS. KWIK: Thank you, Carm. That's good.

10 MS. BRICKENDEN: Thank you. I'll check with Laurie
11 again. For those of you listening, if you do have
12 questions, I remind you you can e-mail them into the
13 rrf@ontarioenergyboard.ca account. Any other thoughts?
14 Andrew?

15 MR. SASSO: Just to Bill's point, I would fully expect
16 any distributor and I would fully expect the ratepayer
17 groups, and the Board in setting the targets, to develop a
18 sense of dead bands on either end of the various targets,
19 and I would expect that there would be gradations. And I
20 wouldn't expect the dead bands would necessarily be the
21 same for all distributors.

22 You would appreciate because there is a new foray into
23 a certain issue or area of expenditure that the dead band
24 may need to be a little bit more generous in a particular
25 plan. You know, maybe there's some type of an acquisition
26 or a merger or something like that, and there is a little
27 bit more uncertainty; whereas on some of the other metrics
28 it might be a little bit tighter.

1 And I would hope and fully expect that Board Staff, in
2 taking any kind of corrective measures associated with
3 that, would -- you know, Board Staff is very good about
4 that kind of thing. They would pick up the phone and they
5 would call the utility and do some initial preliminary
6 work. That's how they operate.

7 So I think it's -- I think we've got a good regime to
8 put that into, because I think we're good at dealing with
9 those kinds of situations as opposed to jumping right to a
10 compliance proceeding or something, or a financial penalty.

11 MS. BRICKENDEN: Thank you, Andrew. Judy Simon?

12 MS. SIMON: Just one comment. I like the direction of
13 dealing with the setting of targets when rebasing and the
14 approval of targets.

15 I think it might be helpful if there was some choice.
16 If the OEB actually provided some default options, that
17 might be helpful to some utilities and also provide some
18 direction. I think the dead band idea is a good one.

19 For any setting of the targets, I think we need to
20 figure out what the linkage is between that target setting
21 and what productivity factor and what stretch factors we
22 might set, because we might -- I'm concerned about double
23 counting and making sure that there is some way to separate
24 out -- separate out the different factors, and also want to
25 make sure that the stretch factor and the productivity
26 factor actually is in line with the targets that we're
27 setting.

28 MS. BRICKENDEN: That's an interesting comment. I

1 don't know if you can expand on that, Judy. What we've
2 been doing is setting the stretch factor on solely
3 efficiency ranking. So going forward, once we do have a
4 scorecard established, the efficiency ranking could be one
5 item that informs the Board as to an appropriate
6 assignment.

7 But the overall scorecard, and maybe what commitments
8 have been made on the scorecard, should be another. Is
9 that what you're hinting at?

10 MS. SIMON: Well some of the -- yes, and some of the
11 measures that are on the list so far do embed some
12 efficiency components, and some of the things that we've
13 discussed, as additions to the measures, may also have an
14 efficiency component. So there is some overlap
15 potentially.

16 MS. BRICKENDEN: Thank you, Judy.

17 MR. BAKULEV: Alex Bakulev from Hydro. I think there
18 should be -- convenient to this comment, there should be a
19 linkage between investment plans and the targets. So when
20 you say that, okay, we would like to improve telephone
21 accessibility, but we need to spend an additional 2 million
22 on that, right, Board, are you allowing us to do that or
23 not? If not, then that's the target. If yes, then we have
24 to commit ourselves to this new target.

25 But then if we do that, we have to have a value for
26 each of the target, so meaning willingness to pay. For
27 this improved service, for improved reliability, for
28 improved safety, public safety, employee safety. So

1 definitely if we go to set these targets and if you're
2 going to link these targets to the proposed plans, we have
3 to do the surveys on the willingness to pay and mainly for
4 the customers.

5 MS. BRICKENDEN: Thank you, Alex. Andrew?

6 MR. SASSO: And I was going to ask this question to
7 Peter offside, but maybe I'll just ask it here.

8 Is there any thought with these targets and with these
9 scorecards in terms of the policy development process
10 afterwards? And that -- so if we had these scorecards in
11 place a few years ago before, let's say, going into some
12 customer service amendments or Green Energy Act initiatives
13 or low-income processes, building that in -- and maybe it's
14 too premature to deal with, but any thought to how this
15 might inform the Board's policy development process?

16 MR. HOEY: I think you had it right when you said that
17 might be too premature right now to figure out how that's
18 going to work. As we go through the process and we develop
19 the scorecards and figure out better how they're going to
20 be used -- you've made allusion, for example, in the cost
21 of service and how to deal with them there, versus the
22 annual index -- I think it will be a little clearer how as
23 future, for example, public policy objectives come forward,
24 how and when do they ultimately get incorporated into
25 scorecards, because I think we can count on future public
26 policy objectives in this area.

27 MS. BRICKENDEN: Good answer, Peter.

28 Are there any other comments or questions from the

1 room, or from the e-mail, Laurie? Nothing?

2 Well, if there aren't any other questions, I want to
3 thank you very much for sharing your thoughts and your
4 ideas and raising some additional issues for us to chew on
5 at the working group.

6 Our first working group meeting is tomorrow, and I
7 think Brian had indicated earlier on, or Peter, that we
8 will be posting materials in relation to the working group
9 meetings on the Board's website, so you can try to stay in
10 tune with what's being discussed.

11 And I do hope that you will be hearing from working
12 group members. We will need your input.

13 So thank you very much for a productive morning.
14 Let's break for lunch, and I suggest we reconvene at --
15 how's 1:00 o'clock? Thank you very much.

16 --- Luncheon recess taken at 11:52 a.m.

17 --- On resuming at 1:02 p.m.

18 MS. BRICKENDEN: Good afternoon, everyone. I think we
19 can start again. I would like to introduce to you Larry
20 Kaufmann, and I will pass the microphone over to him.
21 Larry.

22 **PRESENTATION BY LARRY KAUFMANN, PH.D.**

23 DR. KAUFMANN: Thank you, Lisa. Everyone can hear me
24 okay from back here? Okay, good.

25 This presentation this afternoon is going to look at
26 the empirical analysis and the benchmarking more broadly
27 defined. As we have heard from this morning's session,
28 benchmarking plays a significant role in the renewed

1 regulatory framework, and our empirical work is going to
2 inform the rate adjustment mechanisms under fourth
3 generation IR and the annual IR index, and it may also play
4 a role in terms of a review of custom IR applications.

5 And more broadly benchmarking, as we've heard this
6 morning, will be used to assess distributor performance and
7 the public's evaluation and facilitation of comparisons
8 among the different companies, the different distributors.

9 And our work is going to be building on the work that
10 we did for third generation, and in third generation IR,
11 that included -- well, the work there included total cost
12 benchmarking, a TFP study that was used to set the
13 X factor, the productivity factor, and input price trend
14 research. Some of that work was done by Staff, but that
15 was used to inform the choice of the inflation factor and
16 the form of the inflation factor, whether that would be
17 industry-specific or an economy-wide measure of inflation.

18 This time out, we're advising the Staff on the
19 development of benchmarking models, and those models are
20 going to inform a number of aspects of the renewed
21 regulatory framework, including the inflation factor, the
22 productivity factor again, and again the benchmarking
23 models.

24 But the difference between third generation and fourth
25 generation and the renewed regulatory framework in general
26 is we're going to be moving to a much more Ontario-specific
27 analyses, deriving these parameters from Ontario-specific
28 information and Ontario-specific analyses.

1 That includes the inflation factor; also, the
2 productivity factor and the benchmarking models.

3 And another difference is the benchmarking models in
4 third generation were based on benchmarking of operation,
5 maintenance and administrative cost, OM&A cost. This time
6 out, we're going to be benchmarking total cost. So we're
7 going to include capital cost, as well as OM&A costs, in
8 the benchmarking analyses.

9 As I'm sure you all know, last month a report was
10 released by the OEB, a concept paper which addresses the
11 empirical analysis, and it was relatively high level, but
12 does go into some detail in terms of the details and the
13 various components of the analyses that would be performed
14 on the inflation factor, the productivity factor and the
15 benchmarking work.

16 And here in this presentation, I'm just going to walk
17 through the main issues that were discussed in the concept
18 paper, try to flesh those out a little bit, reinforce some
19 of the messages there, and mostly take questions and
20 comments from you. And I consider this kind of the kick-
21 off of the working group process, in a sense, for me in
22 terms of getting feedback from the industry and customer
23 groups and other stakeholders in terms of trying to get as
24 much input as we can, so that we can do the best possible
25 analyses that reflects the concerns and make sure we can be
26 as sensitive as possible to the various data constraints
27 and the concerns of all stakeholders.

28 For me, that's an important part of what we're doing

1 today, is to get your feedback so we can begin to
2 assimilate that and make sure that's reflected in our work
3 going forward.

4 So just a brief summary of how this is going to be
5 organized: Start with the work we did last time, because
6 we are going to be building on that, and then talk a little
7 bit about the data sources that we plan to use in our
8 current analysis, and then go through the three specific
9 empirical components of the rate-making framework. And
10 that's the three empirical pieces of analysis we're going
11 to do, the inflation factor, the TFP analysis, "TFP" for
12 those of you -- I'm sure that's a very familiar term by
13 now. "TFP" stands for total factor productivity -- so the
14 total factor productivity analysis we're going to do, and
15 then the benchmarking analysis. And, again, benchmarking
16 this time is going to be total cost and not OM&A cost.

17 So third generation incentive regulation, there was a
18 rate adjustment formula for third generation IR and it had
19 three main components. There was an inflation factor, and
20 then there was an X factor that had two components, and
21 those were a productivity factor, which was the same and
22 common for all firms in the industry, and then a
23 productivity stretch factor which was specific to three
24 different cohorts of companies.

25 The inflation factor was -- the one that was selected
26 by the Board was the GDP IPI, or the implicit price index
27 for gross domestic product, gross domestic product final
28 demand. That's obviously a measure of economy-wide

1 inflation, a measure of prices for gross domestic product.

2 We did look at trying to develop more tailored input
3 price inflation factors for the distribution industry, the
4 Ontario sector itself, but there were a number of concerns
5 with the measures that were developed in third generation
6 IR, and one of the biggest concerns was with volatility in
7 measured inflation.

8 The measures that were developed could vary quite a
9 bit from year to year, and that obviously matters in terms
10 of a plan going forward because, all else equal, you would
11 like to have an inflation factor that's relatively steady
12 and doesn't fluctuate wildly from year to year.

13 And one of the things we found when looking at the
14 different inflation -- industry-specific inflation factors
15 we examined in third generation IR was that there could be
16 a lot of volatility from year to year under that approach.
17 And because of that, the Board decided not to go with an
18 industry-specific inflation factor but, instead, with an
19 economy-wide factor.

20 The X factor, the two components for the productivity
21 piece, again, that was an industry-wide trend. So that was
22 the trend in total factor productivity for the industry,
23 and because especially at the time -- and we'll be talking
24 about this quite a bit more, but there were data
25 constraints on the available data in Ontario. And given
26 those constraints, it wasn't really feasible to develop a
27 total factor productivity measure for the Ontario sector.
28 So, instead, we used the US electricity distribution

1 industry as a proxy for the Ontario industry.

2 And the work we did looked pretty carefully at the
3 measures of productivity that we did have for the industry
4 in the US versus the industry in Ontario for different time
5 periods, and we found that there was a pretty close
6 correlation in terms of contemporaneous productivity
7 changes and changes and kind of directions or inflection
8 points in the growth of productivity in both the US and
9 Ontario.

10 And because of that we thought that the US was a
11 pretty good proxy for Ontario, and that's what we suggested
12 and that's what we proposed in our work. And the Board
13 accepted the use of the US electricity distribution
14 industry as a proxy for Ontario. And the productivity
15 factor they selected was based on our study, the average
16 TFP growth from the 1998 through 2006 period, and that
17 number was 0.72 percent. So the approved productivity
18 factor in third generation IR was 0.72.

19 Some of you may remember there was some debate and
20 discussion about the length of the sample period, and the
21 Board in third generation used the longest sample period
22 that was available to it, which was 18 years. So that's an
23 important thing to remember going forward, because even as
24 we transition to an Ontario-specific analysis, it's very
25 unlikely we're going to have a sample period of that long
26 for fourth generation.

27 So there was an 18-year sample period that the
28 productivity factor was based on last time. If we go to an

1 Ontario-specific study, and we're going to, the sample
2 period will be shorter. So that's a factor to keep in
3 mind.

4 The second component of the X factor was the
5 productivity stretch factor, and again, this was
6 differentiated between three groups of companies in the
7 industry, based on benchmarking analyses which gave us some
8 idea of a relative efficiency. So the idea was that if
9 you're a relatively efficient distributor, then you have
10 less ability to make incremental productivity gains, and
11 that's what the stretch factor is supposed to capture, is
12 your ability to make incremental productivity gains
13 relative to the industry.

14 So if you're more efficient, then you have less
15 ability to do that, and you should have a lower stretch
16 factor. If you're less efficient, then you have more
17 ability and you should have a higher stretch factor.

18 So we had developed two benchmarking studies. One was
19 an econometric or statistical analysis of the expected
20 costs of distributors, and then we used that model to
21 compare the difference between companies' expected costs
22 under the model versus their actual cost, and then we also
23 had some statistical confidence intervals around the cost
24 prediction.

25 And we said that if a company -- if a company's actual
26 cost was below the model's prediction and outside of the
27 confidence interval, then we had some statistical evidence
28 that the company was statistically superior on the

1 econometric model.

2 So whenever I use the term "statistically superior,"
3 that means that it's outside of the confidence interval
4 around the prediction of the company's cost.

5 So if a company was -- a distributor was statistically
6 superior on the econometric model and we also had a unit
7 cost model, the unit cost model looked at just the unit
8 OM&A cost, the total OM&A cost, and then divided that by a
9 comprehensive index of its output. And that comprehensive
10 index of output included three output measures: customer
11 numbers, kilowatt-hour deliveries, and circuit kilometres
12 of line.

13 So those were weighted up, and that was equal to the
14 comprehensive output index. Then those unit cost measures
15 were compared; each company was assigned to one of 11
16 cohorts or peer groups, and its unit cost was compared to
17 the average unit cost for the other distributors in its
18 assigned peer group.

19 And the peer groups were based to our statistical
20 analysis of what were the main cost drivers. That had to
21 do with things like size of the company, whether they were
22 on the Canadian Shield or not, extent of undergrounding,
23 things like that.

24 So there were 11 cohorts, and we looked at each
25 company's unit cost relative to the average unit cost of
26 its cohort, and looked at that difference. And if a
27 company was in the top third, when you rate those
28 differences from top to bottom, if it was below the average

1 and it was in the top third, then that was also evidence of
2 good cost performance.

3 So if a company was statistically superior on the
4 econometric model and in the top third on the unit cost
5 model, then those were two indications that it was an
6 efficient company. And if both of those things were true
7 at the same time, then that was the top efficiency cohort;
8 these were the most efficient distributors in the industry
9 based on these two benchmarking analyses, and they got the
10 lowest stretch factor, which in this case the Board decided
11 was 0.2 percent.

12 And then, conversely, if a company was statistically
13 inferior on the econometric model, which means that its
14 cost was above the cost prediction and outside of the
15 confidence interval, and it was on the bottom third of the
16 unit costs benchmarking analysis, then those are two
17 indications of relative cost inefficiency. So if both of
18 those things were true, then that was considered to be the
19 least efficient cohort of distributors, and they got a
20 higher stretch factor of 0.6.

21 All other companies essentially were either -- both of
22 those things weren't true simultaneously, and they got a
23 stretch factor of 0.4.

24 So the benchmarking work was used directly -- and
25 again, this is OM&A benchmarking; it was not total cost
26 benchmarking. But it was used directly in third generation
27 to identify different cohorts of distributors in the
28 industry that are distinguished based on their relatively

1 efficiency, and the stretch factors were assigned to
2 different cohorts based on that analysis.

3 So if you were identified as being more efficient, you
4 benefited in a sense by having a lower stretch factor.

5 Conversely, if you were identified as being less
6 efficient, then you had a higher stretch factor.

7 And the way that the analysis kind of played out is
8 that if you look at how many companies were assigned to
9 each of these three categories, it was kind of like a bell
10 curve. About two thirds of the companies got a stretch
11 factor of about 0.4 percent; they got the 0.4 percent
12 stretch factor. And then there were about one-sixth of the
13 companies identified as either the efficient cohort or the
14 relatively inefficient cohort, about one-sixth on each, so
15 kind of out on the tails. You know, it had kind of a nice
16 bell-shaped curve, which was kind of intuitively appealing
17 and helped to support the idea this was a reasonable
18 analysis.

19 Okay? So that's third generation.

20 Now, it's important to remember that from the outset
21 we wanted to do an Ontario-specific analysis, but we just
22 didn't have enough data from Ontario to do that at the
23 time. And one of the key data constraints had to do with
24 capital. We only had capital data from 2002 through 2006,
25 and so we had a capital stock in 2002 and capital additions
26 from 2002 to 2006. That's all the data we had available to
27 us right now. And that's not -- for reasons I'll talk
28 about a little bit going forward, that's not really enough

1 data to do -- to get an accurate measure of a company's
2 capital stock.

3 So because of that, because we were constrained on the
4 capital data, we confined our benchmarking analysis to OM&A
5 costs, and we know that there are problems, potential
6 problems with that. There are always going to be concerns,
7 because a company's OM&A performance can be affected by its
8 capital decisions. We knew that going in. And that's why
9 we decided to have two tests, so that we were only going to
10 assign stretch factors if our analysis was relatively
11 robust, in a sense, if two tests were identifying the
12 company as being efficient or inefficient.

13 But we were constrained on the capital data, and that
14 did have implications for the analysis we did.

15 Now, here we are five years later, so there is
16 obviously more data on capital additions, and we've been
17 working with Staff to try to get more historical capital
18 additions data, which would allow us and give us more
19 confidence in doing a total cost analysis and in doing a
20 total factor productivity analysis for the Ontario
21 industry.

22 So that's been -- that's been and that will be a key
23 focus of our work going forward, is trying to get good
24 capital data and trying to integrate that so that we can
25 develop total factor productivity analyses, total cost
26 analyses, and try to get measures of the productivity
27 factor and the benchmarking models that are specific to the
28 industry.

1 Okay. Any questions there before I move ahead to the
2 work for fourth generation? Jay?

3 **Q&A/DISCUSSION SESSION:**

4 MR. SHEPHERD: Larry, do you know whether we have any
5 data on how the utilities responded to benchmarking being
6 only on OM&A? Did it result in any change in emphasis
7 within utilities, or do we know?

8 DR. KAUFMANN: I don't know that yet. We haven't done
9 any sort of analysis. That could be something that might
10 be worth looking into on our report, in our analysis.

11 MS. KWIK: Judy Kwik for the Power Workers' Union. In
12 Power Workers' Union's submission for the RFE we note that
13 we have seen an increase, a substantial increase, in labour
14 capitalization and overhead capitalization in the mid to
15 late 2000s. This is on an aggregate basis.

16 DR. KAUFMANN: Yes.

17 MR. HOEY: Patrick Hoey, Hydro Ottawa. I think you a
18 made a comment a few minutes ago that because the data set
19 in third generation was limited to O&M, we needed these two
20 comparator methods for doing cohorts, meaning the
21 econometric and the peer grouping; is that correct? Is
22 that what you are saying?

23 DR. KAUFMANN: One of the reasons we wanted to use --
24 have two tests is because -- yes, because we -- because we
25 only had OM&A data. So there's going to be less confidence
26 in an OM&A benchmark analysis, at least in principle, than
27 with the total cost analysis. That's correct.

28 MR. HOEY: Okay.

1 **CONTINUED PRESENTATION BY DR. KAUFMANN:**

2 DR. KAUFMANN: Okay. So let's talk about the data.

3 And all of the data we use will be put on the Board's
4 website by Board Staff as that data become available. And
5 at the end of -- by the time that we've done all our work
6 and we have assembled a comprehensive data set and we
7 prepare a report, we will put that data set out, the entire
8 data set, which would include the raw data, all the data
9 transformations, all the business condition variables, all
10 the input prices. Everything would be there, and we would
11 make that available at the time we make our report
12 available. And we've been doing a lot of work to make the
13 presentation of that data as user friendly as possible.

14 So I don't know how many of you were following the PBR
15 proceeding in Alberta, but the TFP study that was
16 commissioned by the Alberta Utilities Commission, they did
17 put their data set out on -- they made their data set
18 available at the time the report was available, and that's
19 an example of a firm that did that.

20 Our approach is going to be we're going to make our
21 data that we provide much more user friendly than that. It
22 should be -- it should make our work much more -- we want
23 to make our work very transparent, and we want to have the
24 review and the commenting on the work to be -- we want to
25 facilitate informed commentary and informed review.

26 So we're putting a lot of emphasis on -- as we
27 assemble this data and present it, we want to make sure
28 that it's in a form that everyone can access and understand

1 in a very user-friendly way.

2 So the data that have been posted so far -- and our
3 main data source will be the RRR filings from 2002 through
4 2011. These are sections -- mostly section 2.15 and 2.17
5 of the RRR. That includes the cost and a lot of the output
6 data.

7 But, again, we wanted to look for a longer time
8 series, particularly on capital, and because of that we've
9 gone back and we have accessed some of the old MUDBANK
10 data. And I'm sure a lot of people in this room are
11 familiar with MUDBANK. Some are probably much more
12 familiar than I am. But just a brief review, for those of
13 you that aren't, MUDBANK data were data that were collected
14 by Ontario Hydro, in the previous organization and
15 structure of the industry, when Ontario Hydro had kind of a
16 regulator role for the municipal utilities.

17 They collected a lot of data from the municipal
18 utilities, and they used that to evaluate suitability of
19 investments and things like that.

20 The MUDBANK data is the data set that reflects the
21 data collected by Ontario Hydro for the municipal
22 utilities, and Staff has done a lot of work to access some
23 of the old MUDBANK data. And at the time, Ontario Hydro
24 was collecting that data for more than 300 municipal
25 distributors.

26 Obviously there has been a lot of consolidation and a
27 lot of changes in the industry since then. Staff has done
28 a great job of taking that data and making it compatible

1 and showing how all the consolidations are compatible with
2 the 77 distributors that exist right now.

3 We have the MUDBANK data and we are in a position to
4 map that MUDBANK data to the RRR data for the 77 companies
5 that exist now. But we're only interested in the MUDBANK
6 data on the capital additions, and I'll talk more about
7 capital in a second. It's important to try to get as long
8 a series of capital addition data as you can if you want to
9 have an accurate measure of a company's -- distributor's
10 capital stock, and obviously that's critical now, because
11 we're going to be benchmarking capital and we are going to
12 be using capital to develop a TFP trend for the Ontario
13 sector.

14 **Q&A/DISCUSSION SESSION:**

15 MR. McLORG: Larry, hi. Colin McLorg, Toronto Hydro.
16 Just a quick clarifying question. Will the integrated
17 capital data be made available prior to your analysis on
18 it, so that utilities can check for accuracy and omissions
19 and so on?

20 DR. KAUFMANN: My understanding is the MUDBANK data is
21 available now. What we don't have, though, the MUDBANK
22 data only has capital stocks. So they don't have capital
23 additions, but you can infer capital additions by looking
24 at changes in gross plant and making some assumptions on
25 retirements between those years.

26 So we don't -- what's available now are the MUDBANK
27 data on capital stocks and capital additions data under the
28 RRR filing. So the pieces are there, but we haven't

1 assembled those in a consistent and coherent manner right
2 now.

3 We could do that, but we're probably -- so if you
4 like, we can make that part of the database available
5 sooner rather than later.

6 MR. McLORG: Well, that's helpful. But with respect
7 particularly to the mapping of the data to the existing set
8 of utilities, will utilities and all stakeholders have a
9 chance to review that for accuracy and completeness prior
10 to the analysis being carried out?

11 MS. BRICKENDEN: Yes, definitely, Colin. That's why
12 we posted it, and we actually want to take this to the
13 working group and ask the help of the working group to
14 review the information and get a better understanding of
15 how good is it. How well does it produce a continuous
16 trend?

17 MR. McLORG: Okay, perfect. Thank you.

18 MS. GRIFFITHS: Sarah Griffiths with PowerStream.
19 Recognizing the 2012 data isn't due until April 30th and
20 the timing that is obviously going to go in the next couple
21 months to the development, is there any potential to use
22 2012 data just knowing this would all be based -- you know,
23 we're going forward for 2014 and that is a few years' lag
24 time?

25 DR. KAUFMANN: My understanding is, given the time
26 lines that have been set for making decisions, that that's
27 probably not going to be feasible. We have to have our
28 report in by early April -- sorry, Brian, you may want to

1 take this.

2 MR. HEWSON: Sorry, not to pre-empt Larry too much,
3 but I was going to suggest, Sarah, that I think it is
4 something we want to talk to the working group about,
5 whether there is some way to -- I mean, if there is a way
6 to feasibly bring that into the work that Larry is doing,
7 whether it's in the report that's due or after when the
8 Board is considering the process for setting the actual
9 numbers.

10 DR. KAUFMANN: I can say adding your data is not a
11 really trivial task. A lot can change so...

12 MR. ALTOMARE: Larry, Carm Altomare, Hydro One. I
13 would like to follow up on Colin's point. I was requested
14 by Lisa to see if we did have the data going back to the
15 '90s, if not to late '80s, and I was really challenged with
16 an answer.

17 So I believe I passed you to regulatory and they, in
18 essence, passed off to finance. And my understanding, from
19 an e-mail I received from finance, is that they don't have
20 any confidence in that data at all.

21 So I think for the records we should make that noted,
22 that even though it was being collected by Ontario Hydro 20
23 years later, or whatever, to go back and use that data, our
24 finance people are not very comfortable with that.

25 So I thought I should pass that along.

26 MS. BRICKENDEN: A question of clarification, Carm.
27 We're talking about the Hydro One Distribution equivalent
28 or retail system information; correct?

1 MR. ALTOMARE: Yes.

2 MS. BRICKENDEN: Not necessarily the MEU-reported
3 information in the annual reports; it's different.

4 What we discovered was that the Ontario MUDBANK data
5 surprisingly does not include -- well, not surprisingly.
6 It does not include the Ontario Hydro retail system, and
7 that's the missing puzzle that we've been working with
8 Hydro One to try to get.

9 And I do not see value in fabricating data. We've had
10 this conversation. So if it's available, it's available,
11 and if it's not, it's not, and the MUDBANK data is what it
12 is. We're not looking to revise it or...

13 MR. ALTOMARE: I'm happy to hear that, Lisa.

14 DR. KAUFMANN: Carm, that's kind of the point -- the
15 final two bullets, that's the first of the two bullets
16 below, so that's what we're referring to there, the pre-
17 2002 data the Hydro One itself, as opposed to the munis.

18 Okay. So that is the MUDBANK data. The MUDBANK data
19 is online, and another piece of data or another source of
20 data that's online are the data on the low-voltage charges
21 that are paid by some distributors, some embedded
22 distributors in the Hydro One system, who don't have
23 certain types of low-voltage assets and instead purchase
24 those -- essentially rent those assets from Hydro One, and
25 pay low-voltage charges. Those low-voltage charges aren't
26 reflected in those distributors' OM&A costs, so it's
27 important to have data on those when we benchmark those
28 distributors.

1 So that's the purpose of having those data, and those
2 data are posted on the website.

3 And then there are two other pieces, and I should say
4 that what's also been posted on the website are data for
5 2000 and 2001, which are similar to the RRR filings, but my
6 understanding is that those aren't exactly RRR filings for
7 those years. But those were data that PWU made available
8 and requested be posted on the site. And with some
9 redactions for privacy, those data are now available, as
10 well. And that happened after I prepared this
11 presentation.

12 So the two pieces of data that we're still working on
13 and still hoping we can get information on, to get into our
14 data set so that we can have the most complete data that we
15 need to do the analysis, one is the capital additions for
16 Hydro One for the old Ontario Hydro system that -- the
17 distribution system for the old Ontario Hydro company for
18 the '89 through '98, and possibly for the '89 through 2002
19 period.

20 And then also the -- some data on smart meters, and
21 the issue here is that during the sample period, between
22 2002 and 2011, companies swapped out through kind of a
23 rolling process their old accumulation meters for smart
24 meters. And when the old accumulation meters were no
25 longer being used, they were considered stranded and they
26 were taken off the books for the RRR filings.

27 So what we noticed is that there are these
28 discontinuities, there are these declines in assets as

1 companies' smart meters come on and as the accumulation
2 meters go off. And the smart meter capital investments are
3 not recorded directly in the RRRs either. There is a
4 different filing and -- my understanding -- a different
5 regulatory process for approving those.

6 So we know that companies' meters are not
7 disappearing, and if we don't have some data on the meters
8 that are taking the place of the old accumulation meters,
9 it's going to look like companies are making these big
10 capital savings because capital is disappearing just
11 because of a regulatory -- what happened with the meters
12 and the regulatory accounting.

13 So what we're trying to do is we're trying to get
14 enough information so we can fill in that gap and we can
15 get the smart meter investment for each of the companies as
16 the companies make that investment and as those investments
17 replace the meters reported as stranded and that disappear
18 from the RRR filings.

19 And Staff is actually working on a data request to the
20 companies, which is going to -- which has a template which
21 will ask the companies to provide that data.

22 Bill?

23 MR. HARPER: Bill Harper.

24 I don't know if you were here this morning, Larry, but
25 one of the utility representatives, when we were talking
26 about benchmarking, raised the issues of utilities that own
27 their own transformers. And this was a practice that
28 started probably back somewhere in the 1990s, actually.

1 So I was wondering -- I didn't notice this on your
2 list here. We talked about the low-voltage charges, where
3 you had a plan or a formal attempt through your process to
4 acknowledge the fact that, just from a capital perspective,
5 some utilities will have these investments built into their
6 capital additions that you're talking about, and others
7 won't have them at all, sort of thing.

8 DR. KAUFMANN: Right. That's an important issue for
9 the benchmarking, in particular, when you want to compare
10 companies, the companies that have those high-voltage
11 assets and the ones that don't.

12 And there are some data in the RRR filings on the
13 extent of that, the number of transformers above different
14 kV levels, and I believe there's some breakdown, too, of
15 assets by type.

16 So we can use that, and we will look at those as
17 business condition variables in the econometric analysis.

18 Andrew?

19 MR. SASSO: Andrew Sasso, Enwin.

20 I don't know -- it's not clear to me, so I take it
21 that the capital additions, that means net of capital
22 contributions, and I'm just curious what impact that has,
23 if anything, in terms of what kind of picture this paints
24 of utilities that either had changes in capital
25 contributions over time or maybe have generally high
26 capital contributions versus low capital contributions.

27 DR. KAUFMANN: Capital contributions are out of the
28 analysis, because they're not regulated under IR.

1 So in that sense, they're not -- that's not a relevant
2 IR cost, so it shouldn't be in the TFP trend.

3 Whether it should be in the capital levels that are
4 used for benchmarking, I suppose is an open issue, a
5 debatable issue. If we did that, if we included the
6 capital contributions for benchmarking, didn't include them
7 for TFP, then we would have to have two capital stocks, two
8 types of capital stocks. We would have to kind of roll
9 those back in.

10 So I suppose that could be something we could discuss
11 in the working group meeting, whether it's worth doing
12 that, whether that's a significant enough issue.

13 MS. McLORG: Lori McLorg, Veridian.

14 One other differentiation on -- I just thought of it
15 when Andrew was talking, not only on things like
16 transformer station ownership but how the utility was
17 actually formed.

18 For example, our service area is non-contiguous.
19 We've been formed by the amalgamation of many utilities, so
20 as a result, the number of actual distribution stations
21 that we have per customer is higher than, say, another
22 utility that's a small, compact service area.

23 So would capital additions look odd for us, or high,
24 compared to others, but that's not necessarily an
25 inefficiency; it's just history.

26 DR. KAUFMANN: That is a variable that we are going to
27 consider in our work, is whether or not companies have
28 contiguous or non-contiguous areas.

1 As you probably know, that's an issue that's been
2 raised by the distribution task force, or -- they just
3 issued a report a few weeks ago. That was one of the
4 things they raised in terms of the structure of the
5 industry and the impact on industry cost.

6 So we will be considering that as a business condition
7 variable in the benchmarking.

8 MS. MCLORG: But in consideration, that's what I'm
9 asking, is -- because it's historic, and not necessarily
10 that had you been green-fielding this or the utility had
11 been developed differently, those costs and those capital
12 additions are there and they can't be changed because of
13 the fact that we can't move the service areas together.

14 So what I'm trying to understand is: Would it be
15 taken into consideration, and what could, on the service,
16 look as an inefficiency be explained by that variable and
17 removed?

18 DR. KAUFMANN: Well, yes. I mean, the way it would
19 work is we would include that variable in the cost model,
20 and if it shows, if having a non-contiguous service
21 territory is shown to have a statistically significant
22 impact on the company's cost and to increase the company's
23 cost because of that, then we would keep that variable in
24 the model.

25 And then for companies like yours that had that, we
26 would -- your cost prediction would reflect the fact that
27 you had a non-contiguous service territory. So your cost
28 prediction would be higher.

1 Lisa?

2 MS. BRICKENDEN: I don't have a question, but I wanted
3 to remind the participants listening in that they may send
4 in any written questions that they have for Larry to the
5 RRF e-mail account, and we have Laurie monitoring that.
6 Thank you.

7 DR. KAUFMANN: Okay. So any final questions on the
8 data issues? Okay.

9 Well, data, if there have been data challenges from
10 the beginning, those are the challenges that we see right
11 now and -- but we're going to do our best and try to
12 develop -- you know, use the available information again to
13 develop a TFP trend for the industry and to develop the
14 best possible benchmarking models for the industry, total
15 cost benchmarking.

16 So let's talk about the inflation factor. In its
17 October Board report for the RRF, the Board said that it
18 will adopt a more industry-specific inflation factor for
19 fourth gen IR, and also for the annual IR rate-making
20 formula. An industry-specific inflation factor is one that
21 is constructed as a weighted average of the growth in
22 specific input price sub-indexes. These are indexes of
23 price change for individual inputs or individual classes of
24 inputs.

25 So, for example, you can have industry input price
26 inflation as being a weighted average of the growth in
27 prices for labour, prices for non-labour, O&M inputs, and
28 for the growth in capital. And if capital is about 60

1 percent of your cost and your OM&A costs are split 50-50
2 between labour and non-labour, then you would have
3 something like this as an industry-specific input price
4 inflation factor, apply a 20 percent weight to the growth a
5 labour price index, 20 percent weight to the growth in some
6 proxy for the inflation and non-labour OM&A prices, and 60
7 percent to the growth in the capital price index.

8 MR. SHEPHERD: Can I ask a question about that, Larry?

9 DR. KAUFMANN: Sure.

10 MR. SHEPHERD: The -- Jay Shepherd, sorry. For
11 utilities, labour is a big factor in capital, as well. I'm
12 wondering how you factor the two together?

13 DR. KAUFMANN: I'll be talking about the capital price
14 index in just a second. There are several pieces to it,
15 but you're absolutely right that will show up as a piece of
16 the price index for capital. Any other questions? Okay.

17 In its October RRF report, the Board specified various
18 criteria for the inflation factor to satisfy, and one is to
19 use data that are readily available from the public, from
20 public sources and their objective. So they come from
21 respected sources like StatsCan.

22 For labour prices, the report said that inflation in
23 labour prices would be indexed by a generic and off-the-
24 shelf labour price index, so not something that's specific
25 to the Ontario electricity distribution sector.

26 And inflation in non-labour prices should be indexed
27 by something that is as specific as possible to the Ontario
28 distribution sector.

1 So those were the criteria that were laid out in the
2 report. Going forward for the working group, I think the
3 two main issues we have to consider with respect to the
4 inflation factor is: One, what are the best choices for
5 the sub-indexes? That's mostly what picking an inflation
6 factor -- choosing a reasonable inflation factor for an
7 inflation index would be, getting the best possible
8 measures for labour, non-labour, O&M and capital price sub-
9 indexes.

10 And then second, because of the concerns with
11 volatility with the industry-specific measures that were
12 developed in third generation, we're going to be looking at
13 options to mitigate the volatility in whatever inflation
14 measure might be proposed. So, for example, in each year
15 the inflation factor that applies in the rate adjustment
16 mechanism could be computed as a three-year moving average
17 of the inflation that's computed under the formula where
18 it's a weighted average of the different sub-indexes.

19 So it wouldn't just be the inflation in that year. It
20 would be the average inflation over the last three years;
21 just one possibility.

22 The second piece is the productivity factor, and high
23 level basics on total factor productivity, that's defined
24 to be relationship between output quantity and input
25 quantity. So you could have a total factor productivity
26 level index which is equal to the level of output quantity
27 divided by the level of input quantity, or you could look
28 at the growth in TFP. And that would be equal to the

1 changes in output quantity minus the changes in input
2 quantity.

3 Obviously, in an incentive framework, what's relevant
4 is the growth in total factor productivity. In general,
5 there are two main approaches that can be used to estimate
6 total factor productivity growth. One is an indexing
7 method, and all an index is is a way to aggregate a
8 different type of information into a comprehensive measure.

9 So here, with productivity, we would be talking about
10 aggregating different outputs into a comprehensive output
11 measure or different inputs into a comprehensive input
12 measure.

13 So that's one approach, and, in fact, that's by far
14 the most common approach that's used. But you can also use
15 econometric or statistical methods to project total factor
16 productivity growth going forward, and I'm going to talk a
17 little bit about those two approaches and the pros and cons
18 of each in the next few slides.

19 Let's start with the indexing approach, because that's
20 what we did in third generation and that is the most common
21 approach. An indexing method would again compute
22 comprehensive measures of output quantities and input
23 quantities, and then the change in TFP would be equal to
24 the change in the output quantities minus the change in the
25 input quantities.

26 And output quantity would be a weighted average of
27 billing determinants. So that's the right -- those are the
28 right outputs to select in a price cap indexing

1 application. So the main billing determinants for
2 distributors would be customer numbers, kilowatt-hour
3 deliveries and peak demand, kilowatt demand, to the extent
4 that's billed.

5 Now, in theory, when you compute a comprehensive
6 output quantity and you weigh each of these three outputs
7 by something to come up with an overall measure, in theory,
8 the right way to weight these three outputs are by the
9 share of each in distribution revenues.

10 So you would look at the total amount of, say, your
11 distributor's revenues that you collect from customer
12 charges, from monthly charges per customer, you look at the
13 revenues you collect from kilowatt-hour deliveries and you
14 would look at the revenues you collect from peak demand
15 charges, and then you would look at the share of your
16 overall revenues associated by each, and those shares would
17 be the shares that you apply to the different outputs.

18 So that's theoretically the -- that's what theory says
19 should be the approach you use, but unfortunately that data
20 is very difficult -- I mean, you have it, distributors have
21 it, but it's typically not provided to the regulator, and
22 it would be a laborious exercise to ask for that.

23 So in practice, because those data typically aren't
24 available, the proxy that's used most often is, instead of
25 using revenue shares, to estimate cost elasticities. So
26 there you're not looking at the impact of different outputs
27 on a company's revenue. Instead, what a cost elasticity
28 tells you, it is an estimate of how much a change in cost

1 or change in output impacts a company's cost.

2 So we would get estimates. What's done is to get
3 estimates of those cost elasticities for the three outputs,
4 and then scale them so they're expressed as shares of
5 overall cost elasticity so they all add up to one.

6 So, in other words, let's just say for customer
7 numbers, kilowatt hours, deliveries and kilowatt demand, we
8 found the cost elasticities were 0.9 -- no, let's say 0.7,
9 0.2 and 0.1 for those three. Let's make it a little more
10 interesting. Let's say 0.7 and 0.2 and 0.05.

11 What you would do, then, is the weight that would
12 apply to customer numbers would be 0.7 divided by 0.7, 0.2
13 plus 0.05, and then similarly for the other two outputs, as
14 well.

15 So that's the approach we used in third-generation IR,
16 and that's the approach we intend to use in fourth
17 generation, as well.

18 Andrew?

19 MR. SASSO: Andrew Sasso, Enwin.

20 So how does customer mix play into this, if at all?
21 Because I guess one would expect different customer mixes,
22 as opposed to the customer numbers as a whole, to have a
23 fairly big impact.

24 DR. KAUFMANN: We always look at that and we always
25 test for kilowatt-hour deliveries to different -- for
26 customer numbers, it's very difficult to identify kind of
27 significant impacts on number of industrial customers,
28 because they tend to be so small.

1 Basically, your customer number overall is going to be
2 overwhelmingly driven by your residential customers, but if
3 you look at how kilowatt-hour deliveries are broken down
4 between different groups, between residential, commercial
5 and industrial customers, and if you have each of those
6 three as being separate outputs, then you can test to see
7 whether each of those has statistically significant and
8 identifiable -- identifiably statistically significant
9 impacts on costs. And if they are showing up as
10 statistically significant cost drivers, then we use those.
11 We decompose the kilowatt-hour deliveries into different
12 components to different customer groups.

13 But if there is no statistically relationship, then we
14 don't.

15 MR. SASSO: Do you do that on an LDC-by-LDC basis to
16 do that check, or is that on an aggregate basis?

17 DR. KAUFMANN: It's on an industry basis.

18 MR. SASSO: So a utility like Enwin, which gets 55
19 percent of its revenue -- and since we do cost allocation
20 properly, 55 percent of the cost is residential, compared
21 to, perhaps, PowerStream, where I would think it would be,
22 like, 98 percent residential or something on a revenue
23 basis, or some huge percentage -- whatever it is -- or is
24 everybody just about the same?

25 I'm just surprised that you could do it on an industry
26 basis, that there would be enough commonality in terms of
27 what it means to each utility.

28 DR. KAUFMANN: You want a certain variability in the

1 data so that you can get good estimates, so that's not
2 necessarily problematic.

3 All it's showing you is an impact of a one percent
4 unit, so it's not so much -- if we were to make a
5 prediction for your cost, it would reflect the impact of
6 your volume mix, your volume mix and your output mix, so
7 that would be reflected.

8 But what it's really showing you is the impact of a
9 one percent change of each of those different outputs on
10 any distributor's cost, if that makes sense.

11 And to look at that and to get that estimate, you have
12 to look at the whole industry. We're not going to have
13 enough data, and it would be incredibly expensive and time-
14 consuming to try to come up with company-by-company
15 estimates. And it probably wouldn't be a worthwhile
16 exercise, anyway.

17 MR. SASSO: Last clarification, just because I'm
18 trying to understand it.

19 So that would be for this abstract, typical -- you're
20 creating -- for lawyers, we would call it the reasonable
21 person. You're inventing a construct, called sort of the
22 typical LDC, and then you're comparing against that and --
23 is that --

24 DR. KAUFMANN: All we're really identifying are
25 function -- parameters of a cost function. If you want to
26 get very technical about it, that's what we're doing.

27 We're estimating -- the assumption, if you want to say
28 that, is that there is kind of an underlying technology for

1 the industry, and all distributors share that technology.

2 What we're doing is we're identifying the parameters
3 of that technology, and we're saying that those parameters
4 apply just as well to Enwin as they do to Enersource, to
5 Toronto Hydro, you name it, but what's going to differ is
6 the mix of outputs that you provide relative to others.

7 So the parameters don't change, but when you would
8 make a prediction for your cost, you would want to control
9 for the difference in your output mix, and we would do that
10 by using your specific outputs to generate a cost
11 prediction for you.

12 MR. SASSO: So you're saying that if Enwin adds
13 another customer or if Enwin adds 100 more customers, the
14 cost is projected to be a certain amount based on adding
15 100 customers, for example, just picking one of these
16 factors?

17 DR. KAUFMANN: Yes. I -- the change of your cost
18 would be projected by the change in those customers, the
19 percentage change, multiplied by the elasticity.

20 MR. SASSO: Right, but if our current customer mix --
21 and I don't know if this is true or not, but if our current
22 customer mix is a predictor of our future customer mix,
23 then for every, let's say, 100 new customers that get added
24 in our service area, one of those might be a large user,
25 whereas Essex Power Lines, because they have no large
26 users, for every 100 customers that they add, none will be
27 a large user.

28 So the cost won't change in the same way for every 100

1 customers we each add, but that's okay because it all gets
2 evened out, is what you're saying?

3 DR. KAUFMANN: No. We wouldn't just identify -- we
4 would never just focus just on those 100 customers, because
5 that's not the only thing that changes.

6 There are a number of variables in the cost model;
7 there would be customers, there would be kilowatt-hours.
8 So we would look at -- when we look at what's changing
9 between period one and period two, we would look at all the
10 cost driver variables. To come up with a good prediction,
11 you have to look at everything. If your customer mix -- if
12 you have a more industry-intensive sort of customer base
13 and that's what's increasing, then your customer change
14 might be the same as another company but your kilowatt-hour
15 change will be bigger. And we would factor that in, as
16 well.

17 So the prediction would pick up both of those things.
18 It would pick it up implicitly, because you're adding
19 customers that are bigger. So it would be reflected there.

20 Colin?

21 MR. McLORG: Hi, Larry. I have several questions, so
22 I'll ask you and the audience to bear with me a little bit.

23 Just to begin with, I gathered from what you just said
24 that when you did this regression to estimate the
25 elasticities, you used all the cost drivers; is that
26 correct? Or did you just regress cost against these three
27 variables that we see on the screen?

28 DR. KAUFMANN: We used all the cost drivers.

1 MR. McLORG: I see.

2 With respect to kilowatt-hour deliveries, was it your
3 theory that delivery utility costs change marginally with
4 marginal changes in kilowatt-hour deliveries?

5 DR. KAUFMANN: It's not a theory; it's just something
6 we test empirically. We see if there's any empirical
7 support for it.

8 MR. McLORG: Because most utilities, I think, in the
9 room would say that if any given customer or group of
10 customers takes 10 percent fewer kilowatt-hours in a month
11 or 10 percent more kilowatt-hours in a month, our costs
12 don't change at all, except perhaps with respect to losses,
13 which aren't reflected in our costs that you're recording,
14 anyway.

15 DR. KAUFMANN: I would say two things about that.

16 First, you're talking about a very short-run analysis.
17 I mean, you're talking a month-to-month sort of
18 perspective. This is supposed to be a long-run sort of
19 analysis.

20 So month in, month out, if you're serving more
21 kilowatt-hours from a given system, you would think that
22 there would be more wear and tear on your transformers, as
23 opposed to a company that has less.

24 So that's what we're trying to pick up, in a sense, is
25 the long-run effect, as opposed to the fluctuations from
26 month to month. That's kind of in theory.

27 But in practice, one problem with -- we know that the
28 kilowatt-hour variable to some extent picks up peak demand,

1 because the peak demand data tend not to be as good. So to
2 some extent, it's picking up the peak demand variable as
3 opposed to kilowatt-hours. Obviously, those two can differ
4 from company to company based on load factor, but there is
5 kind of a little bit of simultaneity between those two
6 variables.

7 MR. McLORG: To what degree would you say there is co-
8 linearity between these variables? For instance, the
9 kilowatt-hour deliveries would be highly correlated with
10 customer numbers, over the long run, as you say?

11 DR. KAUFMANN: Well, there's some, obviously. There's
12 some, but this is picking up the independent impact of
13 that. And depending on your customer mix, particularly if
14 you look at -- and that's one of the benefits of having a
15 very diverse sample in Ontario. You're going to have
16 companies that have -- you're going to see a lot of
17 difference in kilowatt-hours per customer. And if you have
18 that, then that's going to give you more confidence that
19 you're going to be able to identify a statistically
20 significant impact for kilowatts as distinct from
21 customers, if you had variation in that, in the kilowatt
22 per customer metric, which we do have here.

23 So yes, there is some co-linearity, but if you have a
24 lot of diversity in that relationship, then it makes it
25 more likely you can identify statistically significant,
26 distinct impacts for both of those outputs.

27 MR. McLORG: Probably I'll take up the econometric
28 discussion with you in the working group without burdening

1 this discussion.

2 My last question is: How is it possible to square
3 this measurement of output quantity with the fact that, as
4 a condition of licence, utilities in Ontario are required
5 to reduce kilowatt-hour deliveries and kilowatt demand?
6 That's a condition of licence for us.

7 So it appears to me that if there's a policy direction
8 from the province which has been embodied in conditions of
9 licence issued by this Board to the effect that utilities
10 are required and have specific targets to reduce their
11 output as it's measured by this methodology, how is it
12 possible to square that requirement with the requirement to
13 increase productivity?

14 DR. KAUFMANN: Well, this is -- all we're really doing
15 at this point is we're talking about measuring
16 productivity, and what I'm saying is that particularly, I
17 think, given there is that requirement, you want to make
18 sure that kilowatt hours are reflected in the output
19 measure, because this is something that's a condition and
20 it's something that's a real experience in your industry.

21 And if that's true, then if kilowatt hours are going
22 down relative to history, that would be reflected in lower
23 productivity.

24 MR. McLORG: Exactly.

25 DR. KAUFMANN: That's fine. All we're trying to do is
26 come up with the best possible measure of -- I mean, at
27 this point, all we're really talking about is coming up
28 with the best and most accurate measure of what

1 productivity actually is in the sector, but that doesn't
2 mean -- so that's our mission, but in terms of actually
3 increasing your productivity, you can still increase
4 productivity on the cost side, and I'm sure that's what the
5 Board would argue and the government would argue is what's
6 intended by that sort of policy.

7 MR. McLORG: All right. We'll take this up in
8 submissions. Thank you.

9 DR. KAUFMANN: Jay.

10 MR. SHEPHERD: I'm quite sure this is going to be a
11 stupid question, but I'll ask it anyway. If the
12 theoretically correct way to weight the output quantities
13 is by revenue share, I don't understand why cost elasticity
14 is a good proxy.

15 It seems to me that assumes there is some connection
16 between the actual revenues that utilities get for each of
17 these categories relative to costs, and I think that my
18 understanding certainly is that nobody believes that's
19 true, that in fact revenue shares are based a little bit on
20 rate design and how classes are structured, and things like
21 that, and historical anomalies and not as much -- actual
22 revenues, and not as much on cost drivers.

23 DR. KAUFMANN: I agree with that. It's not a perfect
24 proxy. This could be something we could take up in the
25 working group if anybody has any better ideas on how we can
26 weight these outputs. We're not going to have the revenue
27 share data. The cost elasticity data again is what we used
28 in third generation. It has been used numerous times.

1 It's not perfect.

2 MR. SHEPHERD: And then the follow-up to that is the
3 Board is, in parallel with this, looking at increased
4 revenue decoupling which would presumably change the
5 revenue shares. How do you factor that in?

6 DR. KAUFMANN: If there is revenue decoupling, then
7 that would suggest cost elasticity shares are appropriate,
8 because then -- this is a technical, point and we can deal
9 with this in the working group, but if you have revenue
10 decoupling then -- full revenue decoupling, then the cost
11 elasticity shares are in fact the correct ones to use.

12 You're picking up the revenue impact through the
13 decoupling mechanism, so you don't need to pick it up
14 through the rate adjustment mechanism, as well. If you
15 did, there would be double counting. Yes.

16 MS. MCLORG: When Jay had those questions about
17 weighting and what was to be used to weight the outputs,
18 I'm not on the working group, so I'm wondering. Is part of
19 the working group's mandate to determine what are the
20 proper outputs quantities, what are the proper outputs, or
21 is that already something that's done?

22 DR. KAUFMANN: The working group can weigh in on that;
23 that's fine. But, in theory, the right outputs to use for
24 a price cap formulation are the billing determinants.

25 MS. MCLORG: So that means the other things that were
26 going to be measured on the scorecard even during -- when
27 we come back -- say the premise was we set a scorecard and
28 we come back in and say, How did we do on our scorecard?

1 In between, we're measured on something different, that is
2 this, as output, but these other things, reliability, for
3 example, there is a cost to reliability, but that on this
4 basis we're not measured on it between there or on our
5 productivity? There is no correlation? There is no
6 meshing of these?

7 DR. KAUFMANN: It matters in terms of costs, but think
8 about it this way. Right now your revenues don't depend
9 directly on reliability. If you provide more reliability,
10 you don't get a price increase because of that. You don't
11 get a price increase if your reliability goes down.

12 There is no link right now between the reliability you
13 provide and the prices you charge, and because of that it's
14 not appropriate to use reliability as an output that's used
15 to adjust your prices. That's the basic intuition.

16 MR. SHEPHERD: Sorry, I don't think that's true at
17 all, Larry. I think in fact when a utility comes out with
18 a capital plan that's intended to increase their
19 reliability, they get higher rates, and that's why they
20 have higher reliability, and vice versa.

21 DR. KAUFMANN: It's reflected in their cost.

22 MR. SHEPHERD: Which drives up their prices.

23 DR. KAUFMANN: The issue is: How do they recover
24 those prices? They don't recover the prices through a
25 charge for reliability. They recover those prices through
26 higher charges.

27 MR. SHEPHERD: True, true.

28 DR. KAUFMANN: And that's the issue. I'm not saying

1 there is no link. If it impacts your costs, then it can
2 impact your prices. The real issue is how you recover
3 those cost increases.

4 Those are your outputs. If you're not charging for
5 something, it's not, technically speaking, an output that
6 you're providing to your customers in terms of something
7 you're charging.

8 MS. MCLORG: For productivity purposes, but the
9 ability to deliver on the scorecard during the IRM period
10 is tied to not just productivity, but it is tied to those
11 costs of being able to deliver those things. I'm still
12 struggling with that a little bit.

13 DR. KAUFMANN: To the extent there are costs
14 associated with reliability and that's an overall
15 objective, then that would be reflected on cost side, and
16 then that would be reflected -- as costs go up, that means
17 inputs go up.

18 You're installing more capital, whatever, and if
19 inputs go up, then productivity goes down; productivity
20 goes down means the X factor goes down, which means prices
21 go up.

22 MR. HARPER: Larry, I think what people are struggling
23 with, maybe it's the fact that -- the view that what you
24 deliver is directly reflected in what your billing
25 determinants are. That's what the struggle is that Lori
26 was struggling with and I think Jay was struggling with, is
27 the fact that not -- your billing determinants are what you
28 bill on. It is because it's measurable to some extent and

1 you can actually bill a quantity on it, but it may not be
2 reflective of what you view as being the outputs of the
3 industry are, I guess, in terms of -- you know, and I guess
4 -- and there is an unfortunate disconnect between there,
5 because you don't bill on -- you don't bill on the number
6 of seconds during a month for which you had service
7 provided as opposed to didn't have service provided.

8 If you did, that would be a measure of reliability,
9 but we don't bill on that.

10 DR. KAUFMANN: That's right. Reliability is implicit.
11 It's an implicit thing that you're providing your
12 customers. It's not an explicit outcome, and that would be
13 true under cost of service regulation, as well. If you're
14 only regulated under cost of service and you wanted to --
15 and you wanted to have a project -- I mean, you wanted to
16 increase your reliability, there are costs associated with
17 it. What would you do?

18 There would be costs. You would recover those costs
19 through higher prices for the output you charge, customer
20 charges, volumes and peak demand. So that's the issue.

21 MR. STEPHENSON: Larry, Richard Stephenson. That's
22 only true because you're choosing to make it that way. I
23 mean, you've just defined away the issue. If we had a
24 system where the LDC paid people for non-delivery, then it
25 would be a cost and it would be something you could
26 measure.

27 There are systems that do that. One of the things
28 we've been saying for a long time is you've got to get

1 really serious about integrating reliability with rate
2 making, and, I mean, the fact that we haven't done it
3 historically doesn't mean that it's not available. It's
4 just that we haven't chosen to do it.

5 DR. KAUFMANN: Here's the way to think about this, and
6 this is -- I think we've gone a little too deep in the
7 weeds on this, but maybe we can talk about it more in the
8 working group.

9 The way to think about this is if you want to recover
10 the cost of a reliability project, you want to fully
11 recover those costs, should you have a reliability input or
12 reliability as a measure of the output in your output index
13 if you're not in fact charging for a reliability. If the
14 answer to that is yes, if you stick something in the output
15 index which shows that it's growing, when it's not
16 something you're billing for, then that's going to show --
17 I mean, let's say that reliability goes up because of this.
18 That's going to show that productivity is increasing
19 because of this.

20 And that's not actually true, because that's not
21 something that's reflected directly in your revenue.
22 You're not recovering revenue from that extra output that
23 you're providing.

24 So if you include reliability as an output, then
25 you're going to have more productivity growth than actually
26 is being measured. So if you want to fully recover those
27 costs and you're not billing for reliability, then you
28 should not have reliability as an output. That's the

1 issue.

2 So it's just that's the way the math works out. We
3 can talk about this more, but really, if you kind of become
4 comfortable with the math, you can see that that's -- it
5 might be counterintuitive, but that's the way it is.

6 Okay? Well, let's move on, and let's talk about input
7 quantity.

8 **CONTINUED PRESENTATION BY DR. KAUFMANN:**

9 The input quantity is a weighted average of two
10 classes of inputs: the OM&A inputs and the capital inputs.
11 And there's a very basic sort of formula, which relates --
12 basically the cost is going to be equal to -- the cost of
13 an input is equal to the quantities of the input that you
14 procure and the price per unit of input. So because of
15 that, the changes in expenditure are going to be equal to
16 the changes in -- the changes in total inputs procured plus
17 the changes in the prices. You just kind of rearrange the
18 math there, and what you can see is that the changes in
19 input quantity can be measured as the changes in
20 expenditure minus the change in the input price index.

21 So in other words, what you're basically doing is
22 you're looking at total expenditure on an input, you're
23 looking at what percentage of -- what fraction of that
24 expenditure was due to input price inflation, and the
25 difference would be equal to the quantities of the inputs
26 that you purchased.

27 So let's say your input -- your OM&A spending goes up
28 by four percent from last year. If your prices for labour

1 and overall inputs grew by three percent, then that would
2 mean, according to this math, four percent minus three
3 percent equals one percent, so you have a one percent
4 increase in the quantity of OM&A inputs.

5 So that's a way of accounting for input quantity using
6 input price data and expenditure data. And that's the way
7 that we measure OM&A input quantities; we measure it
8 directly as the change in expenditure over time minus the
9 change in input prices over the same period.

10 And the input price indexes that we use are the same
11 that would be used for the inflation factor. So we would -
12 that would be kind of a byproduct. The input prices that
13 we need to compute the input quantity index for OM&A would
14 be a byproduct of the work we're doing on the inflation
15 factor, and vice versa.

16 So that's relatively straightforward. Capital is a
17 little more complicated, and this gets into the issue of
18 trying to use capital additions as much as possible and to
19 go back -- the reason for our interest in the MUDBANK data
20 and to rely on capital additions before 2002.

21 And the reason is that any time you're doing a
22 productivity study, the capital quantity always begins with
23 what is called a benchmark capital. So this is the value
24 of net plant in a given year. And you want that value of
25 net plant to be as far from the current day as you can
26 possibly make it. Why is that?

27 Well, we know that net plant -- the value of a net
28 plant that you report in a given year is going to depend a

1 lot on the vintage of your plant. If you just installed a
2 big transformer last year, that's going to have a big
3 impact on your net plant value because that's a relatively
4 expensive and recent addition, as opposed to investments
5 that you may have made 30, 40 years ago. Just because
6 there is inflation over time and the value of assets this
7 year is higher than assets in previous years, the vintage
8 of what's reflected in your benchmark year, in any given
9 year, matters enormously to what that value is.

10 So because of that, we want that value to be pushed
11 back as far as we can. And we want to use -- instead of
12 that, we want to use capital additions, add the capital
13 additions to that value and build up the capital stock over
14 time, because we have a lot of confidence in the value. We
15 know what those capital additions are in any given year --
16 I mean, if we have that data, then we have confidence that
17 those are good data, and we can also get information on
18 what the asset prices were associated with each of those,
19 each of those increments of capital additions.

20 So we can deflate the capital additions as it's added,
21 if we rely on capital additions instead of a benchmark
22 year. If we want to control for differences in benchmarks
23 across companies, we need to know the -- what the vintage
24 of capital is for distributor A versus distributor B this
25 year, and we don't know that. We're never going to know
26 that. So the way to minimize the impact of that is to push
27 back the benchmark year as far as we can, and instead use
28 capital additions and add those to the benchmark year to

1 build up the capital stock.

2 If we look at the formula we have here, that's what
3 this shows. The X_{KT} , that's the capital quantity in a
4 given year T , and that is going to be interest -- actually
5 there is a typo here. This should be -- one minus the --
6 times X_K , this should be T minus 1. So in other words, you
7 would look at -- what you would do is you would look at the
8 capital stock from the last year, eliminate -- reduce the
9 amount of that capital stock by the amount that it
10 depreciated in that year. D is the depreciation rate. So
11 your capital is equal to capital from last year minus
12 depreciation of last year's capital, plus the value -- VI
13 is the value of capital additions in year T , and then you
14 would divide those capital editions by $WKAT$ here, is an
15 asset price index.

16 So what we're doing here is we're actually building
17 up. We're looking at last year's capital, looking at what
18 it's depreciated, and then we're adding to it this year's
19 capital additions. And because we want this to be a
20 capital stock, so we don't want it to be impacted by
21 inflation in capital asset prices over time, each year
22 we're going to deflate capital additions by a price index
23 for capital in that year.

24 So this is the basic perpetual inventory equation, and
25 this is what we want to do. We want to rely on as -- to
26 the greatest extent possible, when we build up capital
27 values that we use for TFP or for benchmarking, we want
28 those values to be based on this VI number here, the

1 capital additions, and not this XKT minus 1. We want to
2 push that back as far as we can.

3 It looks like, given the data availability in Ontario,
4 the farthest we can push back the capital benchmark year
5 would be 1989. That's as far back as the data allows us to
6 go here, and that's our rationale for the use of the
7 MUDBANK data. If we use MUDBANK, we can push the capital
8 benchmark year back to '89 and rely on capital additions
9 since '89 to come up with capital input measures for the
10 sample period from '89 through 2001, and then from 2002
11 through 2011.

12 That would be -- the alternative would be not -- if we
13 don't use the MUDBANK data, then our benchmark year would
14 be 2002. So again, that's putting much more emphasis --
15 because that's when the RRR data began. I suppose there is
16 a possibility that if 2000 and 2011 data work out, possibly
17 2000 could be our benchmark year, as well, but even so,
18 that's much more distant -- much closer to the current time
19 than 1989.

20 So again, this is possibly a subtle point, but it's
21 important, if you want to come up with an accurate TFP
22 measure and accurate capital stocks for different
23 companies, to not rely on a benchmark year to the greatest
24 extent that you can, and instead rely on capital additions.

25 **Q&A/DISCUSSION SESSION:**

26 MS. McLORG: Lori McLorg, Veridian.

27 Is this type of calculation done for every type of
28 asset class? So for example, it's done for distribution

1 stations, it's done for computer equipment, because
2 depreciation rates would change, and so -- or is it just
3 done on overall capital?

4 DR. KAUFMANN: It's done on overall capital, and we
5 would have an overall depreciation rate. So the
6 depreciation would reflect the entire asset mix, and then
7 the capital additions would be all capital additions.

8 MS. MCLORG: And this is done for the industry as a
9 whole?

10 DR. KAUFMANN: This is done company by company.

11 MS. MCLORG: Company by company?

12 DR. KAUFMANN: Right, and then we aggregate out for
13 the industry.

14 MS. MCLORG: So it doesn't take -- how do you get the
15 depreciation rate per company?

16 DR. KAUFMANN: We will talk about that. There are
17 ways to do that. You can look at regulatory depreciation.
18 You can look at a number of studies of economic
19 depreciation in the economic literature. You can look at
20 depreciation rates that are used by statistical agencies in
21 the US and Canada and other parts of the world.

22 MS. MCLORG: If you're doing company by company,
23 wouldn't you look at their rates?

24 DR. KAUFMANN: Again, this is an economic depreciation
25 rate, so, you know, it's supposed to reflect the economic
26 depreciation.

27 MS. MCLORG: Which is different from the accounting
28 depreciation.

1 DR. KAUFMANN: It could be different from the
2 regulatory depreciation. You can do regulatory
3 depreciation, as well. It's much more complicated, and you
4 need a lot more data to do it well.

5 MS. MCLORG: Is economic depreciation supposed to be a
6 driver when you need to replace it really versus book
7 depreciation? Is that why it's used?

8 DR. KAUFMANN: Technically what it is is it's a
9 measure of just how -- the underlying loss in productive
10 value from the asset.

11 MS. MCLORG: So it would have to be industry specific,
12 because that would vary.

13 DR. KAUFMANN: It is industry specific. So this would
14 be a measure of depreciation for the electricity
15 distribution industry, obviously.

16 MS. MCLORG: Again, so a utility's mix of assets, some
17 utility that has a severe need -- I don't know exactly, but
18 they're not always the same over periods of time for things
19 like computer investment, which is very different from
20 regular distribution assets.

21 DR. KAUFMANN: Right.

22 MS. MCLORG: So those kind of variabilities would
23 still be in there, because you're using a generic economic
24 depreciation?

25 DR. KAUFMANN: To the extent those asset mixes differ
26 from company to company, yes, that could be an issue.
27 Again, if we had -- what you're suggesting is a better
28 approach, but you need a lot more information on specific

1 input prices for different asset classes.

2 MS. MCLORG: Just highlighting what is a mix of --
3 when you say that it's utility specific, there are other
4 elements in there that are not.

5 DR. KAUFMANN: That's right. If there are differences
6 in the change in asset mix from company to company, then
7 that could be an issue. Carm?

8 MR. ALTOMARE: I would like to ask a question to
9 yourself, Larry, or maybe throw it out to the floor,
10 because it's been a while since I looked at accounting
11 definitions, and that. Is there a difference between
12 capital betterments and capital additions?

13 DR. KAUFMANN: Capital retirements, sorry?

14 MR. ALTOMARE: No. What I'm saying is year after year
15 utilities do betterments, as well, for example, either
16 relocating a line because of a highway requiring us to
17 move, or let's say we're improving a line for whatever
18 reasons. We consider that betterment capital.

19 DR. KAUFMANN: That would be reflected as a capital
20 expenditure.

21 MR. ALTOMARE: And would be capital additions?

22 DR. KAUFMANN: Yes. We would record it that way.

23 MR. ALTOMARE: Thanks.

24 DR. KAUFMANN: Bill.

25 MR. HARPER: I don't think you need to go into an
26 explanation now, but maybe tomorrow as part of -- I'm
27 struggling a little bit, and maybe it is the same as Lori
28 was, the purpose for putting depreciation in this, and

1 maybe we can talk about this in more detail tomorrow,
2 because if I installed a transformer station 20 years ago,
3 its depreciation in terms of how much you can -- you know,
4 what it could supply then versus what it can supply 20
5 years later may only have gone down by 5 percent, whereas
6 the age -- you know, it's still able to transform the same
7 amount of power, even though, from an accounting
8 perspective, it has depreciated.

9 So I guess, as I said, unless it's a short answer, I
10 think I need at some point have a better understanding of
11 why we're depreciating it within this formula here. That's
12 all.

13 DR. KAUFMANN: We're depreciating in the formula
14 because the assets really do depreciate, and it's a
15 question of just what that rate is, and that is going to
16 depend on the asset mix. It's not going to be a huge
17 number, in general.

18 If you look at the overall asset mix for distributors,
19 it could be 3 or 4 percent, 5 percent, something like that,
20 and that's going to be weighted more towards -- obviously
21 some things like computer systems and meters are going to
22 depreciate faster than the poles and transformers. That's
23 reflected in the number.

24 That would be reflected in -- if we're looking at
25 regulatory rates or if we're looking at estimates from the
26 literature, that would be reflected in what's estimated.
27 Jay.

28 MR. SHEPHERD: You said this depreciation rate is the

1 estimate of annual loss in productive capacity.

2 DR. KAUFMANN: Yes.

3 MR. SHEPHERD: You're using a straight-line type of
4 approach?

5 DR. KAUFMANN: We're using what's called a geometric
6 decay. Getting into the details of that, let's save it for
7 the working group.

8 MR. SHEPHERD: The reason I ask is because utility
9 assets tend to not depreciate on a straight line, but they
10 tend to go like this, and then puff.

11 DR. KAUFMANN: That's right. We're not using
12 regulatory depreciation, in general. In fact, we won't be
13 using an approach to accounting for depreciation that
14 reflects regulatory accounting. Instead, this is supposed
15 to pick up the long-run sort of impact of depreciation on
16 the assets.

17 MR. HOEY: Just if we're going for a total factor of
18 productivity for the industry, why do we need to separate
19 all the companies individually? Why wouldn't the total at
20 the bottom of the industry be the number you would be using
21 for capital additions, depreciation and all that stuff?

22 DR. KAUFMANN: That is what we use, but we compute
23 that on a company-by-company basis.

24 MR. HOEY: For what purpose?

25 DR. KAUFMANN: It's more accurate. If you aggregate
26 everything up, and then you compute it, you can introduce
27 some biases relative to doing it company by company, and
28 then aggregating those numbers.

1 MR. HOEY: What biases do you introduce?

2 DR. KAUFMANN: Aggregation bias.

3 MR. HOEY: So what you're saying from a math point of
4 view, one and one doesn't equal two?

5 DR. KAUFMANN: I mean, there is a bias. If you want
6 to come up with a very detailed sort of calculation of
7 what's happening, you wouldn't look at point A and point B,
8 and then just divide, because a lot could be happening
9 between A and B.

10 So it's better to look -- it's always better to drill
11 down to the actual cost and the actual outputs that are
12 changing to the greatest extent you can and try to get a
13 measure of that as opposed to just kind of adding
14 everything up, and then trying to get a measure at the end.

15 It's kind of similar to what we were talking about
16 before about the different capital components. You want
17 different indices, to the extent you can. If the
18 information was available, you would take price indexes for
19 different components of capital and you would divide those
20 as opposed to adding up all the capital, and then coming up
21 with an overall index.

22 That's an example of an aggregation bias. Same thing
23 on looking at the industry as opposed to individual
24 companies.

25 MR. HOEY: I can understand an aggregation bias where
26 you're adding up different types of capital, i.e.,
27 transformers versus lines versus computers, but I don't
28 understand why the aggregation goes on a company-by-company

1 basis if we're not doing it on a capital-by-capital type.
2 If you do it on company basis and you are only adding up
3 the total capital at the bottom of the company, you don't
4 have the asset type. You have -- the asset type
5 aggregation hasn't been addressed.

6 DR. KAUFMANN: It's just -- it's a technical
7 mathematical point, but that's what aggregation bias is.
8 It applies to the individual units. It applies to the
9 individual inputs. You're going to have a more accurate
10 measure if you're doing it on a company-by-company basis.
11 The difference, it's almost never huge, but there can be a
12 subtle difference in the number. Jay.

13 MR. SHEPHERD: You're not planning to use the company-
14 by-company data except to get to the overall number; right?
15 You're not planning to publish it so you can compare
16 everybody's productivity?

17 DR. KAUFMANN: That's a good point. For the TFP,
18 ultimately we are only going to use the industry number,
19 but we have to compute the capital numbers on a company-by-
20 company basis anyway, because we're going to do
21 benchmarking for each individual company.

22 We can't benchmark -- so just from a practical point
23 of view, we can't do total cost benchmarking unless we have
24 total cost measures for each company in our sample. So we
25 have to do it there, and given we're doing it for every
26 company, the right thing to do is to compute TFP as well,
27 and then aggregate it.

28 MS. MCLORG: I thought Jay just asked -- it wasn't

1 being used for that, but you're saying it is?

2 DR. KAUFMANN: It's not be used for TFP. For the TFP,
3 again, the only -- we will not be measuring and we will not
4 be reporting each individual company's TFP growth. That's
5 not why we're doing it. We're only computing an industry
6 TFP growth measure, but we are going to also benchmark
7 total cost. And to benchmark total cost, we need to have a
8 capital quantity and a cost of capital cost measure.

9 So we have to compute -- we have to do the same
10 process company by company to do the total cost
11 benchmarking.

12 MS. McLORG: Sorry, just a clarification.

13 So the capital input quantity you're calculating here
14 will still be used on an individual company base into the
15 other benchmarking? So it's not -- the total productivity
16 factor won't be, but the capital piece of it is identical
17 and will be used in the other process?

18 DR. KAUFMANN: That's right.

19 MS. McLORG: So again, I just want to reiterate that
20 using things like generic economic depreciation does -- you
21 can say it's company-specific, but there are things in
22 there that are still generic?

23 DR. KAUFMANN: Generic in the sense of being industry
24 averages, yes.

25 MS. McLORG: No, the economic depreciation, you didn't
26 it's an industry average; you said it's based on -- it's
27 economic depreciation theory, for example?

28 DR. KAUFMANN: No, no. We would still be looking at

1 depreciation studies for the distribution industry. So we
2 would still be looking at evidence for electricity
3 distribution.

4 And again, the evidence that we can consider could
5 include regulatory depreciation rates, what's reported.
6 That could be -- that could be -- that's certainly a
7 feasible approach.

8 So we could use that in our -- you know, in this D
9 here, what we use as the average D. We could even do that
10 on a company-by-company basis, potentially, although we're
11 not going to have as much information company-by-company,
12 and that will add some complexity to the analysis.

13 But whatever we use it will be a distribution-specific
14 depreciation number.

15 MS. BRICKENDEN: I was just going to ask, looking at
16 the time, if people wanted to take a stretch and we'll
17 continue after, say, five or 10 minutes, or whether you
18 would like to motor on through to 4:00 o'clock. We're
19 happy to -- whatever you prefer.

20 Okay. Short break. Let's break for 10 minutes, and
21 we will resume at 10 to 3:00. How's that?

22 --- Recess taken at 2:34 p.m.

23 --- On resuming at 2:54 p.m.

24 **CONTINUED PRESENTATION BY DR. KAUFMANN:**

25 DR. KAUFMANN: So maybe we can summarize the capital
26 measurement issues on slide 16 where essentially to measure
27 capital input quantity for a TFP study and also for
28 benchmarking basically requires four things: A benchmark

1 capital year, which again we want to be as distant from the
2 present year as possible; measures of capital additions in
3 each year since the benchmark year; a measure of the
4 economic depreciation rate; and index of distributor plant
5 asset prices.

6 And this asset price index is going to include
7 construction labour. It's going to include the price of
8 the asset itself. It will be a comprehensive measure of
9 distribution asset prices, and StatsCan does have data on
10 distribution asset price indexes for the distribution
11 sector for Canada - not for Ontario, but for Canada - going
12 back to 1956. So we know there is some data on that.
13 There may be others, but we know at least we have that.

14 So for the working group, some of the issues we will
15 be considering are appropriate values for the depreciation
16 rate and for the distribution plant asset price index.

17 Now, a related issue, and we've talked about this as
18 well to some extent, is when you're doing total factor
19 productivity estimation and you're doing total cost
20 benchmarking, you need to develop measures of costs, as we
21 well as inputs. So we need to develop a measure of total
22 capital costs in addition to capital input quantity, and
23 cost is going to be equal to the product of quantity times
24 input price.

25 So for total capital cost, you would compute that as
26 the product of the capital quantity that we were talking
27 about and we were talking about computing, times an input
28 price. And these two formulas here show some examples of

1 how this can be done.

2 If you add CK_t - that's the cost of capital in year T
3 - multiplied by a capital quantity index from the previous
4 year, multiplied by a capital service price index, which is
5 the $WKSt$, and remember WKA is -- that is the asset price
6 index. And what this shows, rt here is a rate of return,
7 ' d ' is the depreciation rate and WKA_t is the capital asset
8 price.

9 So this is one straightforward measure for a capital
10 service price, and what it shows is basically three things.
11 You have the return on capital, which reflects the rate of
12 return multiplied by the asset price, return of capital
13 which measures the depreciation times the asset price, and
14 then this last piece is a capital -- basically a capital
15 gains issue.

16 So the idea there is that if you're -- if the price of
17 your assets is increasing over time and you're holding
18 those, then that is a gain to your investors, in a sense.

19 This is a capital service price index that's been used
20 in a number of places, and it's one possibility for what
21 we're going to use in our work.

22 But we've also -- we've talked about depreciation, but
23 to implement this part of the analysis and to develop
24 capital costs in addition to capital input quantity, we're
25 going to need a measure of the rate of return in addition
26 to the rate of depreciation.

27 So one possible rate of return is the Board-approved
28 rate of return for each company. There are others, as

1 well, but I think that's the leading candidate for what we
2 would use to implement this formula. But an issue for the
3 working group would be coming up with appropriate values
4 for the rate of return. So that's going to be another
5 issue that we will examine. Questions?

6 MR. SHEPHERD: Yes, I have one question on that. When
7 you're talking about rate of return, you're talking about
8 like a weighted average cost of capital?

9 DR. KAUFMANN: Yes.

10 MR. SHEPHERD: And presumably on a rate reflective
11 basis or straight cost basis? So, for example, net income
12 return on equity produces taxes, as well. Is that part of
13 the factor?

14 DR. KAUFMANN: Taxes is -- that's an interesting issue
15 and we will talk about taxes during the working group as
16 well, because as you know, as everyone I'm sure knows,
17 there have been some changes in taxes policy in Ontario
18 which could have implications for the TFP trend.

19 So that will be another issue, as well, how we deal
20 with taxes.

21 MR. SHEPHERD: Thanks.

22 DR. KAUFMANN: Okay. Well, we've been talking about
23 index-based approaches to TFP based -- TFP measurement, and
24 there are some pros and cons to this approach. Believe it
25 or not, this is the relatively simple approach.

26 Obviously there are a lot of implementation issues
27 involved but, technically speaking, it's not that
28 complicated to do indexing, and you don't necessarily need

1 a lot of cross- -- you don't need big cross-sections. You
2 can compute TFP growth for each individual company, for
3 example, and that can be an issue if -- it's wouldn't be an
4 issue here, but it can be an issue in some jurisdictions.

5 It's not an issue here, because we have 77
6 distributors, so we have a big cross-section, but in some
7 places it can be an issue.

8 The underlying techniques for index-based TFP
9 measurement are relatively well established, relatively
10 well understood and, once you get the hang of it,
11 relatively transparent.

12 We're working from accounting data and we're
13 transforming that into accounting and operational data, and
14 we're transforming that into outputs and inputs, and then
15 using those changes, linking those to rate changes. So
16 those are all pluses for the index-based approach, but
17 there are few potential cons, as well, and one is that we
18 are relying on historical periods over which we're
19 measuring TFP growth.

20 We want to use this estimate going forward, and there
21 could be an issue that the estimate that we compute
22 historically is not appropriate going forward if the future
23 is going to be very different from the past. So that's an
24 issue with the index-based approach that we have to
25 consider. Whenever we look at whatever measure we're
26 computing historically, we have to ask ourselves whether
27 that's appropriate going forward.

28 And that can be an issue if business conditions in the

1 future differ from the past. The cost driver variables,
2 government policy, if those things change in the future
3 compared with the past and there are implications for cost
4 that are different from the past, in terms of cost changes,
5 then again that can be an issue.

6 Another issue here is if we think back to third
7 generation IR, that used a very extensive time series as
8 the basis for the TFP trend, which was then used for the
9 productivity factor. The Board used an 18-year trend from
10 1988 through 2006. And it said that it wanted to rely --
11 its rationale at the time was to rely on as much
12 information as it had available to it.

13 Now, we're going to have much less information this
14 time and we're probably not going to be able to compute an
15 11-year or 18-year trend using indexing methods for
16 Ontario, given the data we had.

17 We did it last time because we were looking at the US,
18 and we have a lot more information from the US. So that's
19 an issue, given the Board's past policy and its decision to
20 rely on a very long-term trend last time.

21 We're not going to have as long a term this time, and
22 that could undermine confidence in the reliability of the
23 -- of the trend that we compute, because TFP can vary from
24 year to year because of changes in output, changes in the
25 timing of expenditures, things like that, but over time
26 those things tend to kind of even themselves out,
27 particularly in industry-wide basis. And if you have a
28 long enough period, they will tend to even out, but as the

1 period declines, it becomes more and more likely that you
2 could have anomalies in that period that make that period
3 not representative going forward.

4 And we know one thing that's potentially anomalous are
5 the impact of recessions. If you have a recession, then
6 output falls, economy wide output for distributors falls.
7 That's going to be reflected as lower TFP growth, but
8 recessions are anomalous, and under the usual scenario the
9 economy is increasing, but we know in the period we have
10 available from 2002 through 2011 there was a very severe
11 recession during that period. So that could be an issue,
12 as well.

13 Another issue is that companies were coming off of a
14 rate freeze, an extended rate freeze, during -- between the
15 period 2002 through 2011. There could have been some pent-
16 up investment spending and other types of spending, which
17 could be reflected in more input quantity growth in that
18 period than you would see over a longer, you know, more
19 normal sort of period.

20 So there are some potential anomalies in the sample
21 period that we have available to us, that we have to be
22 sensitive to and ask ourselves whether those are going to
23 be -- if we have a period that reflects those anomalies,
24 whether that period is appropriate going forward.

25 So given those cons, it's worth thinking about the
26 other approach to estimating TFP, which is -- yes, go
27 ahead.

28 **Q&A/DISCUSSION SESSION:**

1 MR. HOEY: Patrick Hoey from Hydro One.

2 Larry, I didn't -- I should have asked this a little
3 bit earlier, but you went through the explanation of how
4 you got to the OM&A input cost and the capital input cost.

5 I didn't see in the slides how they get put together
6 to come to a total input cost.

7 DR. KAUFMANN: They're added together.

8 MR. HOEY: Just added?

9 DR. KAUFMANN: Total cost is equal to OM&A cost plus
10 capital costs.

11 MR. HOEY: And then you compare that input to the
12 output, and the output is your rates -- revenues; correct?

13 DR. KAUFMANN: No, the output for TFP growth, the
14 output are -- there are going to be customer numbers'
15 volumes and kilowatt-hours. So that's going to be your
16 output growth.

17 Your input growth is going to be, actually, the
18 deflated values, so it's going to be the quantities and not
19 the expenditures. So it's going to be the quantity of O&M
20 and the quantity of capital aggregated together, where
21 those -- basically, it's going to be a weighted average,
22 where you have the cost -- the share of cost that applies
23 to OM&A is the weight that it gets, and then the capital
24 share of cost is its weight.

25 So just for an example, to make that more concrete,
26 let's say your OM&A costs -- your OM&A inputs increase by
27 one percent, and OM&A accounts for 40 percent of your
28 costs, and if your capital increases by three percent,

1 that's six percent -- that's 60 percent of your costs.
2 Then you've got 1.8 plus 0.4, a 2.2 percent growth in input
3 quantity. And let's say you've got measured output
4 quantity of 2.8 percent customers' volumes and kilowatt-
5 hours, then 2.8 minus 2.2 is 0.6 percent TFP.

6 MR. HOEY: Thank you.

7 DR. KAUFMANN: Okay. So that's the indexing approach.

8 The econometric approach is -- basically what that
9 does it takes index-based TFP numbers, but it decomposes
10 those into a variety of TFP drivers.

11 And if -- I wrote a concept report. I'm not even sure
12 when that was. I believe it was in mid- to late 2011, but
13 that was a report that kind of looked at these issues,
14 measurement issues, from a very high level and a certain
15 amount of technical detail.

16 And I have an appendix in there which lays out this
17 calculation; I think it's appendix 1 of the first concept
18 report. And what that shows is that you can decompose TFP
19 growth into a number of specific identifiable components of
20 TFP growth, and those components include things like the
21 time trend or technological change, the impact of economies
22 of scale on TFP growth; so as output grows, the impact that
23 has on your TFP. And then changes in different business
24 conditions that aren't going to be reflected in output, but
25 could be reflected in your cost; things like changes in
26 customer density, changes in undergrounding of lines, those
27 sort of things.

28 You can actually do some statistical analysis and

1 regress due to statistical regression of TFP growth on
2 these various components, or you can also get these
3 parameters from cost functions. And you can estimate the
4 impact of each of these business conditions on TFP growth.
5 Okay? That's the econometric method.

6 And there are some pros and cons associated with this
7 approach. Let's start with the cons.

8 It's more complex. Econometrics is a more complex
9 technique than indexing. It usually requires a bigger
10 cross-section of companies, although that's not necessarily
11 an issue here because we have 77 companies operating under
12 a wide array of circumstances. And the techniques and
13 results are usually less well understood, and for that
14 reason potentially more contentious than the techniques of
15 indexing.

16 However, we are going to be doing econometrics as part
17 of our work for benchmarking, so we're going to be doing
18 econometrics, anyway. So the econometric approach to TFP
19 measurement could be a byproduct of our benchmarking work.
20 We can potentially use that same information to project
21 TFP. And the way we would do that is we would identify the
22 cost drivers, link those to that function that's in
23 appendix 1 of the previous concept report, and take
24 expected values for those business condition variables,
25 stick them in the model and then generate predictions of
26 TFP growth for the industry. We can do that for the entire
27 industry, or we can do that company by company if we wanted
28 to.

1 So -- and that's the -- those are the benefits of the
2 econometric approach. If you wanted to do it company by
3 company, which probably isn't going to be a factor here --
4 but we could reflect differences in company conditions and
5 differences in, say, the impact of undergrounding, the
6 impact of changes in customer density among companies, and
7 the impact that those changes have on distributor A versus
8 distributor B.

9 But more importantly, the econometric approach doesn't
10 require extensive time series data like the indexing
11 approach does. You don't need 11 -- 18 years of data to
12 estimate it, because the model gives you what you use to
13 estimate it, the model parameters. So it can kind of
14 overcome the constraints we have of just relying on the
15 2002 through 2011 period. This is a way to get beyond that
16 limited -- that limited amount of time series data.

17 And it's also potentially valuable if the future is
18 different from the past, because you can take variables
19 that reflect those TFP drivers and get estimates of what
20 those variables are, going forward. And if they're
21 different than what's been observed historically, then you
22 can come with a projection going forward, that might be
23 different from measured TFP historically.

24 So that's the second bullet point under the pros. It
25 can capture differences in future business conditions
26 compared with the past.

27 In that sense, it's a potentially powerful technique
28 and it's a way -- it deserves consideration here, because,

1 one, we're going to be generating the econometric results
2 anyway, so we're going to have the underlying analysis. We
3 can use it for TFP projection.

4 But it's going to be a little more complicated, and
5 it's a whole other issue of -- something to discuss, but
6 again, it's worth thinking about because we only have this
7 relatively short period from 2002 through 2011, and that
8 period includes a big recession and it also includes the
9 expiration of the rate freeze, both of which might be
10 anomalous and both of which might distort what we measure
11 for TFP over that period.

12 And because of that, what we measure may not be
13 appropriate, going forward.

14 MR. HOEY: Patrick Hoey from Hydro Ottawa.

15 If I understood what you were just saying, you can use
16 the econometric model by using some kind of forecast data
17 going forward, and give you potentially a better estimate
18 of what the future is going to be?

19 DR. KAUFMANN: You could. Or you could even use the
20 average rate of growth for each of variables over the
21 historical period.

22 MR. HOEY: Okay. And would the future forecastability
23 of the econometric model depend upon the forecast variables
24 that you use going into that?

25 DR. KAUFMANN: Yes. Whatever variables you plug into
26 the model, yes, that's going to directly impact the
27 projection.

28 MR. HOEY: And where do you get the forecast data

1 from?

2 DR. KAUFMANN: Well, we could always look at -- the
3 simple answer is just to look at the historical record and
4 just say that the long-run rate of change is going to be
5 reflected in history and we can project that going forward.

6 Or we can come up with different estimates, if
7 companies have different estimates.

8 MR. HOEY: But the estimates would have to be five
9 years, since we're locking this down for five years;
10 correct?

11 DR. KAUFMANN: Yes. It would have to be the average
12 rate of things -- average rate of growth of things like
13 customers' volumes, underground lines, change in
14 underground lines. These would all be on a rate-of-change
15 basis, so that kind of reduces the forecasting burden to
16 some extent.

17 MR. HOEY: Okay.

18 DR. KAUFMANN: Again, I know there are some
19 complexities and issues that would be involved with this,
20 but I'm raising it, given the fact of the data constraints
21 we have for indexing.

22 MR. STEPHENSON: It's Richard Stevenson. Without
23 meaning to offend any econometricians in the audience, this
24 has an element of black magic to me, and I mean that in the
25 sense that it's almost entirely opaque to me in the sense
26 that all of the -- standing back from it, you have no idea
27 how the results are arrived at. And insofar as public
28 acceptability is sort of an important value, how do you run

1 that to ground?

2 Like, I'm accepting for the purposes of this question
3 that you get valid outputs. My question is: How do you
4 sell that to people as being valid, in fact, as opposed to
5 simply, Trust me it's right?

6 DR. KAUFMANN: Well, I think trust is going to be
7 built up to the greater extent that people can understand
8 the econometrics. That is a process that takes a little
9 effort. But I think the more you become aware of what's
10 actually happening, the more you understand it, I think the
11 more you will buy into the fact that you will get something
12 reasonable out of it. So that's one thing I can say.

13 I agree it's always going to be a more opaque sort of
14 approach and technique than indexing. But remember we are
15 using it on the benchmarking model, too. We are doing
16 econometric benchmarking.

17 MR. STEPHENSON: That doesn't necessarily give us any
18 comfort. The fact that something else is opaque doesn't
19 help this one.

20 DR. KAUFMANN: Fair enough. And another thing on the
21 econometric model is there are confidence intervals there
22 that we're using. So we're not just basing it on the
23 projection -- you know, on the actual prediction. This
24 would be based on a point -- this would generate a point
25 prediction. We wouldn't be looking at confidence
26 intervals.

27 MR. McLORG: Sorry, Richard, it's Colin at Toronto
28 Hydro. What audience are you trying to convince here?

1 What target audience were you just referring to?

2 MR. STEPHENSON: The people in this room, the LDCs,
3 the people that are going to be governed by the outcome
4 have to have a sense that they're being treated fairly as
5 number one, and then, number two, the people that are
6 ultimately going to be affected by this, which are the end
7 users, to the extent they start getting on the phone and
8 complaining about the fact that their rates are what they
9 are and want some explanation.

10 Public acceptability is a pretty well understood
11 foundational principle of rate-making.

12 DR. KAUFMANN: I'm just kind of thinking out loud
13 here, but there are a number of things you can do to build
14 understanding and awareness and comfort with an econometric
15 approach, and one is, for example, if we were to do this
16 for both Ontario and the US, we could do use back casts of
17 what the model shows about TFP.

18 So we could say, Here is what our model shows, and we
19 have some historical values on what the drivers were. What
20 does the model show us about TFP growth? What would it
21 project for TFP growth for a historical period?

22 And we can compare that to actual TFP growth, and if
23 it shows it's actually in the ball park, then that's
24 evidence this is actually doing a pretty good job of
25 picking up the underlying reality.

26 DR. YATCHEW: Adonis Yatchew. I'm here with the EDA.
27 There is a maxim in law that says justice must not only be
28 done, but it must be seem to be done, and I think that's

1 the centre of -- the heart of your point, and I agree with
2 that.

3 Some of the best models that I have seen are very
4 simple models with a very small number of variables.
5 Unfortunately, there are quite a few confounding factors in
6 this setting, and I might suggest that consistent with the
7 kinds of report I've seen PEG produce in the past, and
8 maybe more so in this direction, you might want to put the
9 technical stuff as far back in the appendix as possible and
10 actually just highlight what it is the model is really
11 saying in graphical terms preferably, and to some extent in
12 -- or as much as possible in language.

13 If somebody were to come up with a nice alternative
14 for setting these various kinds of regulatory indices that
15 is very simple, I would love to see it. It is one thing to
16 say the technology is complicated. It is another thing to
17 say there is a useful alternative.

18 MR. McLORG: If I may be permitted one more comment --
19 I think I agree with Adonis -- suggest that our concern
20 about the validity and the robustness and the soundness of
21 the methodologies used by the Board is I think a separable
22 question from our ability to explain it to any identified
23 audience.

24 And I think that the explanation, as was suggested by
25 Adonis, can be made. It would probably have to be pitched
26 to -- at an appropriate level for the audience in question.
27 And I would never, for example, attempt to explain -- I
28 would never even ask how the guy that fixes my car actually

1 does it, but I do want an explanation from him in terms
2 that I can understand.

3 I think the same thing can be provided for the
4 econometric approach. So I'm just very anxious that we not
5 constrain the actual fundamental approach that's chosen or
6 that's used on the basis that it's hard to explain to our
7 grandmothers. In some degree, this is rocket science and
8 it deserves to be, because this is our fourth go round at
9 IRM. We deserve, all of us, to have increasing level of
10 sophistication in the way we approach this.

11 DR. KAUFMANN: This is obviously going to be an issue
12 for discussion for the working group. Econometric -- you
13 know, this is a valid approach. It is a more technically
14 complicated one, but it deserves merit, given the fact that
15 we're grappling with the limited information we have, and
16 this could be a relevant piece of information that could at
17 least let us know whether whatever we get out of the index-
18 based approach is reasonable.

19 It could be a sanity check on the indexing method, or
20 as Lisa said an insanity check. Hopefully not. Okay.

21 So that is the productivity factor, and now let's talk
22 about total cost benchmarking. The benchmarking was used
23 in third generation to set the stretch factor. Again,
24 there were two benchmarking models. There was an
25 econometric model, and then there was a unit cost model.

26 The unit cost model compared each company's unit cost
27 to the peers in its peer group and looked at the difference
28 between the two. And in fourth generation, we are going to

1 update both the econometric and the unit cost models. So
2 we'll update the models that we developed last time and
3 applied to third generation IR, but this time we're going
4 to be including capital, as well as OM&A costs in the
5 analysis.

6 And our intent is for those capital costs that we add
7 and that we use in the benchmarking work to be identical
8 with those we develop and use in our TFP estimates.

9 In the Board report in October, it said the stretch
10 factor assignments under fourth generation are going to
11 continue to be based on or at least informed by assessments
12 from the two benchmarking models.

13 MR. HOEY: It's the last line there. Can you point to
14 me in the RFP book where the two benchmarking models will
15 be used for the stretch factor assignment?

16 DR. KAUFMANN: I don't have the report in front of me,
17 but it did say it would -- you know, basically the approach
18 that was used in third generation for setting stretch
19 factors would be used at the same time -- you know, would
20 also be used in fourth generation.

21 MR. HOEY: But I think earlier -- I asked you a
22 question earlier today, and you said that if we go to a
23 total factor productivity model, we wouldn't need these two
24 things. We only used the unit cost because we only had an
25 O&M model last time, and now that we're going to a total
26 cost model, that wouldn't necessarily be needed.

27 So I guess my question is: Why do we need the unit
28 cost piece to go with this?

1 DR. KAUFMANN: Why do we need the unit cost and not
2 just the econometric piece?

3 MR. HOEY: Yes.

4 DR. KAUFMANN: Because if you have two tests -- right
5 now we have two benchmarking assessments. And the way the
6 stretch factors are assigned right now are based on kind of
7 a coincidence. You know, it's kind of a -- two positives.
8 If you have two positive measures of being efficient, it
9 then you're assigned to the efficiency -- you know, the
10 most efficient cohort. If you have two positive measures
11 of being inefficient, then you're assigned to the
12 inefficient cohort. And if you're not, then you're in the
13 middle.

14 So having two tests gives you more confidence and it
15 makes the whole assignment of firms to different efficiency
16 cohorts more robust. You're going to have more confidence
17 of that if you have two positives as opposed to one. So
18 that's the reason for having two; both the unit cost and
19 the econometric.

20 MR. HOEY: Only if the two tests are fair?

21 DR. KAUFMANN: Sure.

22 MR. HOEY: Okay.

23 DR. KAUFMANN: But even if they're not fair, you're
24 going to have more confidence than if you just had one.

25 MR. HOEY: If they're not fair, you're going to have
26 more confidence? More confidence in what?

27 DR. KAUFMANN: If you had one bad test, then you're
28 going to have less confidence than if you had two bad

1 tests.

2 MR. HOEY: If I have one good test and one bad test
3 and the bad test outweighed the good test, then I have less
4 confidence, don't I? Or no confidence?

5 DR. KAUFMANN: These -- you can contest the basis of
6 the econometric and unit cost models themselves. That's
7 fine. But the idea is that we're trying to develop the
8 best models we can, given the information we have. And if
9 we have two of them, then we're going to have more
10 confidence that what we're getting for efficiency
11 evaluations are, in fact, fair. That's the idea.

12 MS. BRICKENDEN: I've just been checking the actual
13 text, and no, it doesn't make a specific reference. It
14 just says that it would be assigned based on total cost
15 benchmarking evaluations, one or more, you know, it's -- I
16 think we need to talk about that. If we have really good
17 confidence in it, then we go with one. If we need two in
18 order to have a more robust and confident result, we
19 continue using two.

20 MS. GIRVAN: Julie Girvan for Consumers Council of
21 Canada.

22 I was just wondering, because I know we're going to be
23 discussing this and -- to a large extent, stretch factors
24 during the working group, but it would be interesting -- at
25 least from my perspective -- to get some insider views from
26 the utilities that maybe won't be on the working group
27 about the stretch factors in third-generation IRM and what
28 your views on those were, and then if you see going forward

1 this total cost approach, if you think that's better.

2 I'm looking at Patrick's face. I just think it would
3 be interesting if we had a sort of a broader perspective.

4 MR. HOEY: I can certainly give you Hydro Ottawa's
5 perspective on at least one half, the unit cost assignment
6 to peer groups.

7 It doesn't do what the outcome is expected -- what it
8 says it's supposed to do is to encourage productivity and
9 for people to get better.

10 There is no possible way for Hydro Ottawa to move from
11 cohort 2 to cohort 1. Impossible economically, no matter
12 what we did. The numbers just don't jibe with themselves,
13 and it's because -- it's the peer grouping. It's about
14 who -- which group you get into is more important than
15 actually what your own performance is, so that's why we
16 think it's flawed.

17 You can show -- you can take certain small companies
18 that were put in one group and if you just move them to
19 another group, basically from northern to southern -- and
20 one wonders why you ended up in the north anyway, in the
21 first place -- all of a sudden they lose their cohort
22 standing. They drop immediately from 1 to 2, and there's
23 been no change in their performance at all, no change in
24 anybody else's performance.

25 So all the peer grouping does is say: Depending on
26 where you end up and what group you're in, you're great.

27 There is another group of LDCs that are in the GTA
28 area. They are all good performers from a unit cost basis.

1 They have very low unit cost numbers, but because they're
2 all so tightly in that group, the way the system works is
3 that your percentage gain over the average -- well, if you
4 have a tight group with no average, where everyone is very,
5 very close to the average, none of them appear in the top
6 group because it's mathematically impossible.

7 So it comes down to the selection of what group you're
8 in and how lucky you get with -- whether you get a really
9 bad performer in your group. And if you do, you're away to
10 the races and you'll never be pulled out.

11 And so the people that moved over the last four years,
12 there was only a few utilities that moved from the
13 different groups, and generally it's the same people moving
14 back and forth between the groups. There was no material
15 shift of someone moving from the middle of a pack up into
16 the other group, or down in a group. It was just the
17 people on the fringe, and that's just an anomaly, more than
18 anything.

19 MS. BUTANY-DeSOUSA: Indy Butany, Horizon Utilities.

20 I think I would add to that -- and maybe you're going
21 to address this in a couple of slides, so I might be pre-
22 emptive, but given that Patrick has led the way into peer
23 groups, there was an extensive discussion in 2008 on the
24 matter of peer grouping.

25 And I guess I would just be interested as to whether
26 the peer grouping that existed in 2008 that gets you to the
27 allocation across the three cohorts is what's going to
28 underlie the effort going forward, or given that there was

1 significant submission by -- it was called CEIRM, the
2 Coalition for Effective Incentive Rate Mechanism, which
3 comprised 22 LDCs, whether the submissions therein are
4 going to be revisited on how the peer groupings worked or
5 didn't work.

6 DR. KAUFMANN: Well, the benchmarking analysis, the
7 unit cost analysis would -- it would change. When we move
8 to a total cost approach, the cost drivers can change, the
9 implications for cost can change. And because of that, I
10 think it makes sense to consider different peer groups, as
11 well.

12 So that was going to be and that's -- we think that
13 will be an issue for consideration for the working group,
14 and potentially for our group as -- our work, as well.

15 MR. McLORG: I apologize, because I'm on the working
16 group and so out of Julie's class, but just very quickly --
17 I was going to put this in a form of questions to Larry,
18 but I guess our view is that there doesn't seem to be any
19 additional or independent information that's brought to the
20 analysis by the unit cost analysis.

21 Really, what we understand is that the unit cost peer
22 grouping assumes that there are certain significant cost
23 drivers that have been found through the econometric
24 testing to be so, and utilities are grouped together based
25 on the presence or absence of those cost drivers, but the
26 value for the variables represented by the cost drivers --
27 aside from the binary ones like Canadian Shield, where it's
28 either a one or a zero -- but the value of the variables

1 like degree of undergrounding, customer density, what have
2 you, all those things, is actually not accounted for or
3 taken into account in the unit cost analysis.

4 The unit cost analysis seems to be a devolution of the
5 econometric benchmarking, because when you -- if you take a
6 group, like small northern medium to high undergrounding,
7 if you look at those numbers -- which I did -- you'll see
8 that on the variables there is a great deal of difference
9 between the utilities' variable values. One has a value of
10 three percent; another has a value of 18 percent.

11 But when you simply compare the unit costs without
12 taking into account the influence of those variables on the
13 unit cost, then it seems to me that you're not adding
14 information, you're actually losing information.

15 So I would agree with Larry that we could have more
16 confidence if we had two independent tests, but what I'm
17 not sure of right now is what additional information is
18 brought by the unit cost analysis. It seems to me that the
19 unit cost analysis simply subtracts information from the
20 analysis, and doesn't add anything new or able to
21 triangulate with.

22 DR. KAUFMANN: I would say the unit cost analysis
23 doesn't really subtract. It accounts for those factors in
24 a different way.

25 So the outputs are already reflected directly in the
26 unit cost measure itself, and then the peer groups are
27 designed to reflect for the other factors, you know, the
28 density, urbanization, being on the Shield, et cetera.

1 So the design of the peer groups is another way to
2 pick up those business conditions.

3 Now, I agree that it does it in a -- it doesn't pick
4 up the magnitude of those differences, which is important,
5 but it is another way of looking at it.

6 And one potential benefit from that is the whole
7 opaque -- the opaqueness issue. When you're talking about
8 econometrics, it is a more complicated technique and you do
9 get -- you control for more things in coming up with the
10 efficiency evaluation, but a lot of people struggle with
11 what you're actually getting as the output.

12 Here you're actually using something that companies
13 can see and understand: Here are our costs, here are our
14 unit costs, here are the unit costs of our peers.

15 So, you know, in a sense you could say that you're
16 sacrificing a degree of the precision of picking up the
17 magnitude of those differences within the peer group for
18 having a more direct and explicit comparison that people
19 can understand.

20 MR. HOEY: Larry, I would tend to agree you can use
21 unit cost in that way and that unit cost -- the lowest-
22 unit-cost LDCs in the province would be rewarded, but
23 that's not what happened. The lowest-unit-cost LDCs in the
24 top 10, you know, two or three of them didn't get anything.
25 They were stuck in number two.

26 And they are a top performer based on unit cost.
27 They're also a top performer in terms of the time series.
28 Over time they've either stayed very close to where they

1 originally started from or have been reduced, and there is
2 no reward.

3 There is no translation between your actions and where
4 you end up. There is no alignment between that, so why
5 would management waste their time doing it if what you're
6 doing doesn't result in any change?

7 DR. KAUFMANN: I think that's potentially a relevant
8 point. If for some reason a given peer group concentrated
9 a lot of the good cost performers, which I think is what
10 you're saying, then in a sense you're not getting the same
11 -- you're getting a different comparison than if you happen
12 to be in a peer group with a lot of bad cost performers.

13 That's an interesting issue and we can look at that
14 potentially as -- you know, kind of look at -- I mean,
15 that's something we could investigate to see to what extent
16 that really is a problem.

17 MR. SHEPHERD: Aren't these two methods supposed to
18 end up measuring the same thing two different ways? That's
19 my understanding of it, and if that's the case, then if
20 utilities are ranked differently from one to the other,
21 isn't that something you can then empirically investigate
22 to find out why one method is ranking differently than
23 another, and see whether one is more reliable than the
24 other?

25 DR. KAUFMANN: I'm not sure how you can compare just
26 raw scores like that and see whether one is different than
27 the other. That really depends on the underlying
28 techniques themselves. That's really an issue of whether

1 one benchmarking method is more reliable.

2 MR. SHEPHERD: What I'm hearing from Colin and Patrick
3 is that on one method the results are quite different from
4 another method, and that's hurting some utilities. And if
5 that's the case, doesn't that imply that one of the methods
6 - we don't know which one - is wrong or poor?

7 DR. KAUFMANN: If there were significant differences
8 between that, yeah, I think we could say that. But it
9 wouldn't be that surprising if there were a little bit of
10 variation between the two methods. We're trying to make
11 inferences on something which is difficult thing to make
12 inference on, which is the underlying efficiency of a
13 company.

14 So we have two different approaches. There are pluses
15 and minuses of each approach. Obviously the econometric
16 approach is more sophisticated. I think it is more
17 powerful. It controls for differences across companies
18 more precisely. That's all to the good, but what you get
19 out of it is a measure that some people have difficulty
20 understanding.

21 The unit cost approach tries to get at that in a
22 different way, but what you see is something that's -- I
23 mean, you can actually see the differences, so it's more
24 tangible.

25 MR. SHEPHERD: Can I follow up on one other aspect of
26 that, and that is that the Board has said in the RFE report
27 it's going to consider having greater differences in the
28 stretch factors, and presumably that means that you have to

1 have a more reliable benchmarking measure.

2 Have you given any thought to how to do that, how to
3 test whether your new measure is more reliable than the old
4 measure if you're going to make it worth more money?

5 DR. KAUFMANN: I haven't given that any -- you know, I
6 haven't really given it any thought. At this point, we're
7 still starting, but we will certainly look at that.

8 MR. SASSO: Just a comment on Julie's question about
9 what the utilities who aren't going to be participating any
10 further think about it.

11 I guess our thought is there are some utilities who
12 will -- you know, if you're in the top bracket, you wave
13 this around and you say, We're a top-performing firm, which
14 of course is incorrect, it means that you're one of the
15 most efficient utilities, but efficiency isn't just about -
16 - or being a top performer isn't just about efficiency.
17 It's also about effectiveness.

18 And I think if you look at the list, there are
19 probably some who have done at various points very well or
20 who are not necessarily effective, and I think there are
21 some who have ranked probably not as well who are actually
22 quite effective.

23 I think the scorecarding we were talking about earlier
24 today is about effectiveness. It's about actually
25 delivering results, the outputs that you're actually
26 providing in terms of service and so on. And in my mind,
27 that's what effectiveness is about.

28 You can do very well by not spending any money, and

1 you'll do very well by not spending any money whether it's
2 total cost per customer or OM&A per customer. It doesn't
3 mean you're a top performer. It doesn't mean you're
4 effective. It just means you're efficient, and that's
5 okay, but you have to call it what it is.

6 DR. KAUFMANN: That's a very good point. And if you
7 look at slide 23, issues for the working group, the last
8 bullet point there is whether other performance measures,
9 including the sort of performance measures that would be
10 included in the scorecard that are provided under the RRF,
11 should be examined when establishing stretch factor values.

12 The Board can potentially look beyond this analysis
13 and look to other information that's going to be included
14 in the RRF and measured under the scorecard and use that,
15 as well. The effectiveness sort of measures, reliability,
16 all those things potentially come into play on the
17 scorecard and can inform the stretch factors, as well.

18 MS. KWIK: I really thought that was the intent of the
19 scorecard, is it not? Is that still a question whether you
20 would be using the scorecard in evaluating the distributors
21 in terms of the stretch factors that should be assigned?

22 MS. BRICKENDEN: In terms of stretch factor
23 assignment, yes. We haven't exactly determined exactly how
24 that would be done. That's what we need to consult on.

25 MS. KWIK: But the objective is to incorporate it into
26 benchmarking; right?

27 MS. BRICKENDEN: Yes.

28 MS. KWIK: I just wanted to confirm.

1 MS. GIRVAN: I just had a question in terms of
2 Andrew's point about this idea you might have a utility
3 with low rates that appears efficient, but in fact they are
4 not serving the customers properly. How do you get around
5 that?

6 DR. KAUFMANN: You mean with respect -- in the
7 benchmarking models themselves? Well, we can include some
8 variables in the benchmarking models, for example,
9 different measures of reliability, SAIDI and SAIFI.

10 Those data exist. It was part of the group on
11 reliability and that whole initiative on reliability
12 management and reliability regulation. We know there are
13 issues on how reliability data are collected among
14 companies, but you can potentially use those data as
15 variables in the model and control for those so you can get
16 the impact of those on costs.

17 So if some company is in fact providing higher
18 reliability at a higher cost, it's getting credit for that,
19 in a sense. Companies with higher reliability, if that's
20 showing up as a significant cost driver. And the companies
21 that register higher reliability would then get credit for
22 that in their cost prediction and that would make them look
23 more efficient. That efficiency gain would come from
24 providing that service reliability.

25 There are complications that come from that, too,
26 because measured reliability doesn't just depend on cost.
27 It doesn't just depend on your performance. That's also
28 impacted by how urban or rural your service territory is,

1 what sort of vegetation you have, whether all those things
2 vary. We really should take that into account and get a
3 good measure of kind of the underlying reliability and not
4 just potentially the measure, you know, the underlying
5 reliability performance and not just measured reliability.

6 I'm sorry, let me just finish up there. That's the
7 way to do it statistically. You can also do it a little
8 bit more informally just as -- through the Board's
9 discretion, by evaluating performance on a number of
10 different categories under the scorecard.

11 MS. BUTANY-DeSOUSA: Indy Butany, Horizon Utilities.
12 So now you're on the slide I was hoping you were getting
13 to.

14 So on the peer grouping, then, as the slide indicates,
15 currently there are 11 peer groups, plus Hydro One, so a
16 total of 12. One of the issues for the working group is
17 potential modifications for the peer groups.

18 Are you considering reducing the number of peer
19 groups, or is it wide open?

20 DR. KAUFMANN: I think it's wide open. We'll talk
21 about it. I think this is an issue we can change.

22 MS. BUTANY-DeSOUSA: I'm sorry?

23 DR. KAUFMANN: I think it's wide open. We'll talk
24 about it, and, I mean -- I think this is an issue that we
25 can change.

26 MS. BUTANY-DeSOUSA: I'm sorry?

27 DR. KAUFMANN: I think it's wide open. There is no
28 reason we have to stick to peer groups that were

1 established last time.

2 It's going to depend -- but I think we want the
3 analysis to guide it. If we find there are different cost
4 drivers that we're identifying, if for some reason there is
5 some anomaly in the way companies were assigned to
6 different peers, and let's say there's a concentration of
7 good performers in, say, on -- according to the econometric
8 model, in one of the peer groups, then that might be kind
9 of an unfair -- you're all being, you know -- you're being
10 benchmarked against the best of the best, as opposed to,
11 you know, an average. Your peers are all above average,
12 kind of Lake Wobegon.

13 Those are the sort of issues that we can look at and
14 evaluate, and to see whether or not the peer grouping that
15 we had was reasonable or whether we should change it.

16 MS. BUTANY-DeSOUSA: I think there was significant
17 input in the last consultation on whether or not the peer
18 groupings as they stood were appropriate. And so I
19 appreciate hearing that there is the opportunity to review
20 this exhaustively.

21 MS. KLEIN: We parked Jim Huntington's from Niagara-
22 on-the-Lake cohort question. His question is:

23 "Density of an LDC's distribution system will
24 have a major impact on OM&A. Our next closest
25 cohort has customer density of twice that of our
26 utility, while the other three have multiple
27 densities. Will there be a better recognition of
28 the effect of density as a cost driver in the

1 future?"

2 DR. KAUFMANN: First, there will be a different
3 analysis, because we will be looking at total cost as
4 opposed to OM&A. Again, we're going to be driven -- we're
5 going to let that decision be based on the empirical
6 analysis, what that tells us on customer density.

7 We know that's a cost driver, and we want to make sure
8 that that's reflected appropriately in the peer groups,
9 assuming that we do go forward with the peer group
10 analysis.

11 MS. KLEIN: I have another question from Pauline Welsh
12 from Orillia Power:

13 "Earlier, Jay Shepherd asked if any change
14 resulted from the use of OM&A and benchmarking
15 for third-generation IR. A comment followed that
16 there was an increase in labour and overhead
17 capitalization in aggregate for the industry. As
18 a utility being measured against its peers, our
19 immediate concern is that comparability is flawed
20 due to inconsistent capitalization policies with
21 respect to labour and overhead costs associated
22 with admin support costs. Not all utilities made
23 these change; i.e., utility maintained original
24 capitalization policies as a result are being
25 penalized in the process through the stretch
26 factor. Will use of total distribution cost and
27 benchmarking address this issue? Is total
28 distribution cost simply determined by adding

1 capital and OM&A?"

2 DR. KAUFMANN: The answer to that last question is
3 yes, that is how total cost is computed. And I think to a
4 large extent, it does. If they're just reallocating cost
5 between OM&A and capital, then it doesn't matter when
6 you're looking at total cost.

7 Any other questions?

8 Well, going forward for PEG, the next step for us is
9 to finalize the data set. We have a lot of the data, the
10 2002-2011 data, the MUDBANK data, but we're still waiting
11 on -- and the low-voltage data. We're still waiting on
12 potentially some data on the -- historical data on Hydro
13 One's distribution system before 2002, and we're waiting on
14 the smart meter data, which Staff is going to request from
15 the companies in a data request that's going to go out
16 shortly.

17 So the first step for us is going to be to finalize
18 the data set -- the information is still coming in -- put
19 that together, include the input price variables, the
20 business condition variables that we would use in the
21 econometric model, get all that together.

22 At the same time we're doing that, the working group
23 meetings are going to start tomorrow and we'll be looking
24 to those to explore these issues even more and to
25 incorporate any input from stakeholders into our analysis
26 in terms of what makes the most sense.

27 And I do appreciate the critical comments on what was
28 done in third generation. It can always be improved on, so

1 if there are any things that didn't work out, it's good to
2 find out about those.

3 And three months from now, we're going to release our
4 report and that will include recommendations for the
5 inflation factor, productivity factor, and the cohort
6 assignments for the industry.

7 Yes?

8 MR. BAKULEV: Alex Bakulev, from Toronto Hydro.

9 Larry, have you considered to include a North American
10 data set into the total benchmarking models, not just
11 Ontario ones?

12 And I'll explain why. In Ontario, we have two
13 outliers, Hydro One and Toronto Hydro. So if you consider
14 the total 75 utilities, these two has their -- by far the
15 largest number of kilowatt deliveries, customers, cost and
16 so on. There are two concerns that kind of arise from
17 these two extremes.

18 The first one is that outliers included in the model
19 may skew the results for both groups, for the vast majority
20 of utilities and for the larger ones, right?

21 And the second one, that having only two of them imply
22 that they may have some unique cost drivers that are not
23 reflected in the econometric model. So for example, City
24 of Toronto, it's the only city in Ontario that has two and
25 a half million customers, and quite dense. To be able, for
26 the model, to pick up this variable, you have to have some
27 other utilities with the same business condition, right?
28 However, right now we don't have it.

1 In some research that we did internally, we see that
2 sort of the urban centre is the major cost driver for the
3 utility, bigger than any other business condition driver.

4 DR. KAUFMANN: I'm certainly open to the idea. We
5 have plenty of US data at PEG. We could certainly
6 incorporate that in the econometric analysis.

7 I think the issue would be the Board has said that it
8 won't rely on Ontario-specific analysis for the basis for
9 the productivity factors and the stretch factors. So I'm
10 not sure whether including US analysis in our studies would
11 satisfy that requirement.

12 MR. BAKULEV: These just show that kind of without
13 including these unique cost drivers, the results, the
14 outcomes, may be skewed, and unfairly for --

15 DR. KAUFMANN: Again, I'm certainly open to that if it
16 leads to more reliable and robust -- and I think you make a
17 good point. It probably would lead to more robust
18 estimates of the econometric model for -- particularly as
19 it applies to Toronto Hydro, because we would have more big
20 city companies in that sample.

21 So we could certainly do it, and for the purpose of
22 coming up with better econometric estimates.

23 MR. SHEPHERD: Larry and Alex, I guess if any
24 utilities have their own research on some of these cost
25 drivers and how they -- and especially time series data and
26 things like that, I think it would be useful for the
27 working group to have this stuff. If you have stuff
28 available, I think it would be useful if we got to see it.

1 MR. BAKULEV: Yes, we have -- we'll share it.

2 MS. BUTANY-DeSOUSA: Indy Butany, Horizon Utilities.

3 I was going to add that one of the ways around what
4 Alex was getting at not only is the utility-specific data,
5 but I think from some of the discussions that we've been
6 having that you can't just -- when you look outside your
7 window and you look at the way the peer grouping was done
8 previously, a northern utility that was grouped as northern
9 previously likely isn't a northern utility, and so it might
10 be useful for the benefit of the working group -- Horizon
11 is not on the working group, but would be willing to make
12 presentation to the working group on influencing factors on
13 peer grouping.

14 And given that you are open to issues that didn't work
15 last time, I would put that out there. And we would be
16 happy to make that presentation.

17 DR. KAUFMANN: Any other questions?

18 Lisa, was there something you wanted to... no? Okay.

19 MS. BRICKENDEN: Are there any other questions on the
20 line there, Laurie? No.

21 MS. KLEIN: No.

22 **CLOSING REMARKS BY MS. BRICKENDEN:**

23 MS. BRICKENDEN: Well, if there aren't any further
24 questions for Larry, I would like to wrap up just first
25 with thanking you all for having this conversation with us
26 today. And, yes, we're going to have quite the aggressive
27 schedule for the working groups starting tomorrow.

28 Briefly going over our next steps, I had a couple of

1 conversations with I think two of you, but just going over
2 it more broadly so that everyone hears, the working group
3 meetings are going to be carried out over the next two
4 months. There are eight working group meetings, the first
5 four focussing on the performance and scorecard, the latter
6 four focussing more on the econometric work and the
7 benchmarking.

8 The goal is to have a Staff report to the Board issued
9 for stakeholder comment in April, along with Larry's
10 consultant report. We also would like to invite you back
11 to have a discussion on that Staff report and the
12 consultant report in April. That stakeholder meeting would
13 be followed quite quickly afterwards by a stakeholder
14 conference, where we would like to have a discussion with
15 members of the Board on the specific outcomes of the
16 econometric work and the benchmarking.

17 Written comments would be due in May, and, based upon
18 the consultations, the working group materials, the Staff
19 reports and our subsequent discussions at the stakeholder
20 conference, the goal is for the Board to issue its
21 supplemental report and for Larry's final, if need be,
22 report in June, to be issued in June. That would include
23 the specific rate adjustment indices, the values for
24 inflation, productivity and potential consideration on the
25 stretch factor values.

26 Are there any questions at this point? Well, thank
27 you very much. It was a very productive day.

28 --- Whereupon the conference adjourned at 3:58 p.m.