Ontario Energy Board | Commission de l'énergie de l'Ontario

EB-2021-0212

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, (Schedule B);

AND IN THE MATTER OF a proceeding commenced by the Ontario Energy Board on its own motion to consider the values of the inflation factors to be used in rate adjustment applications for rates effective in 2022

PROCEDURAL ORDER NO. 1
August 27, 2021

On August 6, 2021, pursuant to sections 19, 36 and 78 of the *Ontario Energy Board Act, 1998*, the OEB issued a Notice on its own motion to initiate a proceeding to consider the inflation factor to be used to set rates for electricity transmitters and electricity and natural gas distributors (collectively, Utilities) for the year 2022.

Preliminary calculations of the inflation factors used for adjusting rates in Price Cap IR, Annual Index IR, Revenue Cap IR, and other approved rate adjustment applications for rates effective in 2022 show the following values, compared with the OEB-approved 2021 inflation factor values:

	Enbridge	Electricity Transmission	Electricity Distribution and EPCOR
2022 (estimate)	**1.7%**	**2.5%**	**3.3%**
2021 (approved)	**2.0%**	**2.0%**	**2.2%**

The 2022 inflation estimates are not expected to materially change when final calculations are made with updated Statistics Canada data in September 2021.

As indicated in the Notice, analysis shows that the labour inflation component of the inflation factor, Average Weekly Earnings (Ontario, all businesses), increased by about 7% from 2019 to 2020. According to Statistics Canada, this was caused largely by

temporary and permanent layoffs due to COVID-19 restrictions disproportionately affecting lower wage-earning workers.[1,2]

The OEB has initiated a generic proceeding to review this uncharacteristic change in the 2022 inflation factors, driven by how pandemic-related restrictions on the work force have affected the annual increase in AWE, and to determine how inflation factors should be set for 2022 rate adjustment (Price Cap IR, Annual Index IR and many Custom IR) applications to ensure just and reasonable transmission and distribution rates in 2022.

The OEB's Notice set out the three options that the OEB is considering and noted that the OEB will consider other options, as presented by parties.

Intervention Requests

As a result of the Notice, the following parties requested intervention status in the proceeding:

- Alectra Utilities Corporation (Alectra)
- Association of Major Power Consumers in Ontario (AMPCO)
- Consumers Council of Canada (CCC)
- Electricity Distributors Association (EDA)
- Elexicon Energy Inc. (Elexicon)
- Enbridge Gas Inc. (Enbridge)
- Entegrus Powerlines Inc. (Entegrus)
- Hydro One Networks Inc. (HONI)
- Hydro Ottawa Limited (Hydro Ottawa)
- London Property Management Association (LPMA)
- School Energy Coalition (SEC)
- Toronto Hydro-Electric System Limited (THESL)
- Vulnerable Energy Consumers Coalition (VECC)

AMPCO, CCC, LPMA, SEC and VECC applied for cost eligibility.

[1] Statistics Canada, The Daily, July 30, 2020, August 27, 2020, September 24, 2020, October 29, 2020, November 26, 2020, December 22, 2020, January 28, 2021, February 25, 2021, March 30, 2021, April 29, 2021, May 27, 2021, June 24, 2021. For example, in the June 24, 2021 The Daily, StatsCan states: "This disproportionate loss of lower-wage employment has the effect of increasing average earnings." Each monthly issuance is for the month two months prior – i.e., the June issuance is for April data.
[2] Statistics Canada, The Daily, July 29, 2021.

All parties that requested intervenor status in this proceeding are approved as intervenors. In addition, APMCO, CCC, LPMA, SEC and VECC are eligible to apply for an award of costs under the OEB's *Practice Direction on Cost Awards*.

The list of parties in this proceeding is attached as Schedule A to this Procedural Order.

Cost Awards

Cost awards will be determined at the end of the proceeding. Any cost awards approved by the OEB in this proceeding will be recovered from all electricity distributors, electricity transmitters and natural gas distributors that are regulated by the OEB. The OEB will use the process set out in section 12 of its *Practice Direction on Cost Awards* to implement the payment of the cost awards.

Scope of the Proceeding

The OEB reminds parties that, as indicated in the OEB's Notice, this proceeding will focus solely on determining the values for 2022 inflation factors that would result in just and reasonable rates when used in rate adjustment applications for rates effective in 2022. As identified in the Notice, the 2020 data for the "labour" component of the inflation factors (which is used to set rates for 2022) are atypical, and submissions should focus on what measures, if any, the OEB should take to address this for 2022 rates. This proceeding is not intended to be a review of the overall inflation factor methodology and formula, or the existing framework for setting rates through annual Price Cap IR, Annual IR, Revenue Cap IR or similar rate adjustment options made available by the OEB.

Fact Sheet

OEB staff has prepared a Fact Sheet which provides the preliminary calculations of the 2020 inflation factors, and background on the inflation factor methodology as adopted by the OEB.[3] The Fact Sheet also provides Statistics Canada and Bank of Canada data used in the inflation factor calculations, as well as related statistics on inflation and labour statistics that may be relevant to consideration of the issues and options in this proceeding. The purpose of this Fact Sheet is to aid parties in preparing their submissions by compiling potentially relevant publicly available data. The Fact Sheet is attached as Schedule B to this Procedural Order.

[3] *Report of the Board on Rate Setting Parameters and Benchmarking under the Renewed Regulatory Framework for Ontario's Electricity Distributors* (EB-2010-0379), November 21, 2013 (corrected December 4, 2013)

Stakeholder Meeting

The OEB's Notice outlined the three options the OEB is considering:

1. Continue to apply the existing methodology and formula (including the existing inflation indices) to the 2022 rate adjustments
2. Extend the approved values for 2021 inflation rates for 2022 rate adjustments
3. Update the 2022 inflation rates under the existing methodology using a suitable sub-index of Average Weekly Earnings or a related statistic, Average Hourly Earnings, that is more representative of labour inflation expected to be experienced by distribution and transmission Utilities in 2022.

The OEB also noted that it would consider other options as presented, with supporting rationale, by parties.

The OEB is making provision for an untranscribed stakeholder meeting among OEB staff and intervenors. The stakeholder meeting will give parties an opportunity to review OEB staff's Fact Sheet, share views on the options outlined in the OEB's Notice and discuss any other options that they are considering. It is expected that this meeting will assist intervenors and OEB staff in understanding each other's views, and help them to prepare their submissions. The stakeholder meeting will be a virtual meeting that will be held using Zoom video conferencing. The meeting will not be transcribed, recorded or live streamed.

It is necessary to make provision for the following matters related to this proceeding. Further procedural orders may be issued by the OEB.

IT IS THEREFORE ORDERED THAT:

1. The OEB is setting a date of **September 16, 2021**, from 9:30 a.m. to 5:00 p.m. for a untranscribed Stakeholder Meeting to review OEB staff's Fact Sheet, share views on the options outlined in the OEB's Notice, and discuss other options that intervenors may be considering. This will be virtual event and information on how to participate will be communicated at a later date.

2. OEB staff and parties may make written submissions on the three options being considered by the OEB, and/or other options for the OEB to consider, and shall file these submissions on or before **October 1, 2021**.

3. OEB staff and parties may file reply submissions responding to the submissions of other parties by **October 15, 2021** and serve a copy on the parties in the proceeding.

Parties are responsible for ensuring that any documents they file with the OEB **do not include personal information** (as that phrase is defined in the *Freedom of Information and Protection of Privacy Act*), unless filed in accordance with rule 9A of the OEB's Rules of Practice and Procedure.

Please quote file number, **EB-2021-0212** for all materials filed and submit them in searchable/unrestricted PDF format with a digital signature through the OEB's online filing portal.

- Filings should clearly state the sender's name, postal address, telephone number and e-mail address
- Please use the document naming conventions and document submission standards outlined in the Regulatory Electronic Submission System (RESS) Document Guidelines found at the Filing Systems page on the OEB's website
- Parties are encouraged to use RESS. Those who have not yet set up an account, or require assistance using the online filing portal can contact registrar@oeb.ca for assistance

All communications should be directed to the attention of the Registrar at the address below and be received by end of business, 4:45 p.m., on the required date.

With respect to distribution lists for all electronic correspondence and materials related to this proceeding, parties must include the Case Manager, Georgette Vlahos at Georgette.Vlahos@oeb.ca and OEB Counsel, Michael Millar at Michael.Millar@oeb.ca.
Email: registrar@oeb.ca
Tel: 1-877-632-2727 (Toll free)

DATED at Toronto, **August 27, 2021**

ONTARIO ENERGY BOARD

By delegation, before: Christine E. Long

Original signed by

Christine E. Long
Registrar

SCHEDULE A

TO

PROCEDURAL ORDER No. 1

EB-2021-0212

INTERVENOR LIST

Aug 27, 2021

Ontario Energy Board
EB-2021-0212

APPLICANT & LIST OF INTERVENORS

August 27, 2021

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APPLICANT & LIST OF INTERVENORS

August 27, 2021

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APPLICANT & LIST OF INTERVENORS

August 27, 2021

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APPLICANT & LIST OF INTERVENORS

August 27, 2021

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APPLICANT & LIST OF INTERVENORS

August 27, 2021

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APPLICANT & LIST OF INTERVENORS

August 27, 2021

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SCHEDULE B

TO

PROCEDURAL ORDER No. 1

EB-2021-0212

FACT SHEET

Aug 27, 2021

Ontario Energy Board | Commission de l'énergie de l'Ontario

August 27, 2021

Preliminary Calculations of 2022 Inflation Factors for 2022 Non-Cost of Service Rate Adjustment Applications

Fact Sheet of Statistics Canada and Bank of Canada Data and Description of Possible Alternative Inflation Indices for 2022 Rates Compiled by Ontario Energy Board Staff

EB-2021-0212

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Introduction

The OEB annually updates revenue requirements or base distribution rates of most electricity transmitters and electricity and natural gas distributors (collectively, Utilities) between rebasing applications using an Incentive Rate Mechanism (IRM) methodology. The IRM methodology adjusts revenue requirements or distribution rates by certain inflation factors, offset by a productivity factor. The framework for IRM, including the methodology for the inflation escalator (Input Price Index, or IPI) was adopted in the *Report of the Board on Rate Setting Parameters and Benchmarking under the Renewed Regulatory Framework for Ontario's Electricity Distributors* (EB-2010-0379).[1] There is a separate IPI for electricity distribution utilities and electricity transmission utilities based on different weightings of the labour and non-labour components. EPCOR uses the same IPI as electricity distributors. Enbridge Gas Inc. has its own IPI with no separate labour component.

In anticipation of the update for the IPI used as the inflation escalator for rates adjusted through an annual incentive rate-setting mechanism (i.e., Price Cap IR, Annual Index IR, Custom IR updates) with an effective rate change date in the 2022 calendar year, OEB staff made preliminary calculations, based on currently available Statistics Canada data, of the IPI increases that would result under the existing formula.[2]

Preliminary calculations indicate an IPI of 2.5% for electricity transmitters and 3.3% for electricity distributors for 2022 rate applications. For 2021, the values were 2.0% and 2.2%, respectively.

Base distribution rates (for natural gas and electricity distributors) and transmission revenue requirements subject to rate adjustment formulae are adjusted for more than just inflation. There is an offset for expected annual productivity gains, including a stretch factor depending on the relative cost efficiency of the Utility, and possibly other factors (i.e., a capital adjustment factor in some approved Custom IR plans). In general, these adjustments could range from 0% to -0.6%, with -0.3% being the typical, adjustment for many Utilities in normal price cap-adjustment applications. As such, the preliminary 2022 IPI values would result in the following percentage changes to base

[1] EB-2010-0379 *Report of the Board on Rate Setting Parameters and Benchmarking under the Renewed Regulatory Framework for Ontario's Electricity Distributors*, issued November 21, 2013, corrected December 4, 2013

[2] Recent historical actual data as published by Statistics Canada are used to calculate the inflation factors for the forward rate year. This avoids debates about different forecasts of inflation rates. Assuming normal economic stability, recent historical data serves as a reasonable proxy for the future period. Due to timing of the inflation rate calculations in late 2021 for 2022 rate applications, 2020 and 2019 are the most recent years of historical actual data published by StatsCan. This is discussed later in this document.

distribution rates and to transmission revenue requirements for utilities applying for 2022 non-cost- based rate adjustments:

Sector	Electricity Distributors and EPCOR	Electricity Transmitters
Applies to	Base Distribution Rates	Revenue Requirement
2022 IPI (preliminary)	3.3%	2.5%
Less: Typical Adjustment	0.3%	0.3%
Impact	3.0%	2.2%
Typical Bill Impact for typical residential customer @ 750 kWh/month	0.6% (+0.2% increase over 0.4% bill increase if inflation at 2.2% (2021 approved Dx IPI)	

The source of the uncharacteristic increases in IPIs for 2022 for electricity distribution and transmission is solely from the labour inflation component of the IPI, where annual percentage change in Average Weekly Earnings (AWE) increased significantly which, according to Statistics Canada, was caused largely by temporary and permanent layoffs due to COVID-19 restrictions disproportionately affecting lower wage-earning workers.[3]

The uncharacteristic changes in the preliminary calculations of the 2022 inflation factors (which are unlikely to change materially when final calculations are made with updated data published by Statistics Canada), and the analysis documented by Statistics Canada indicate that the annual percentage change in AWE from 2019 to 2020 is largely due to pandemic-related business restrictions on the work force. The OEB has initiated a generic proceeding to review this issue and to determine how inflation factors should be set for 2022 rate adjustment (Price Cap IR, Annual Index IR and many Custom IR) applications to ensure just and reasonable transmission and distribution rates.

OEB staff has compiled this document that provides background on the inflation factor methodology, and the calculations showing the results for 2022 under the existing methodology based on preliminary data. In response to Option 3 listed in the OEB's Notice and in Procedural Order No. 1 (P.O.1), OEB staff has also compiled various tables of inflation-related statistics on the Implicit Price Index for Gross Domestic Product (GDP-IPI),[4] the Consumer Price Index (CPI), and labour inflation-related sub-indices of AWE and a related statistic, Average Hourly Earnings (AHE). OEB Staff has compiled these data in an effort to assist the parties and the Panel.

[3] See footnotes 13 and 14.
[4] GDP-IPI is the standard acronym for the Implicit Price Index of (national) Gross Domestic Product. "IPI", as part of GDP-IPI, stands for Implicit Price Index. This is distinguished from the use of IPI on a stand-alone basis for Input Price Index, the inflation factor for price cap, revenue cap and Custom IR rate adjustment formulae.

Background on Inflation Factor Methodology

In the 2nd Generation and 3rd Generation Incentive Rate-setting Mechanism (IRM) plans for electricity distribution, GDP-IPI was used as the inflation factor for annual rate adjustment applications. This was a one-factor inflation factor used to represent the inflationary pressures on all applicable components for Ontario utilities (e.g. labour, materials, capital, etc.). GDP-IPI continues to be used as the sole inflation factor for Enbridge's price cap rate adjustment plan for 2019-2023. Enbridge and Union Gas had used GDP-IPI in prior rate adjustment plans and did not propose to change to a 2-factor approach in the proceeding for their proposed merger and rate-setting plan; the OEB approved the continued use of the GDP-IPI for the two legacy service areas.

The 2013 Report,[5] which established the 4th generation parameters for the Price Cap IR approach under the RRFE, adopted a 2-factor IPI. The first factor is for a non-labour component (i.e., material and capital assets) and the second factor is used to reflect labour costs. The 2013 Report established Average Weekly Earnings (including Overtime) – Ontario – Industry Aggregate excluding Unclassified Businesses as the labour price inflation factor. GDP-IPI was retained as the inflation factor for the non-labour component of the IPI. The IPI is calculated as a weighted average of the annual percentage changes in the GDP-IPI and AWE. As determined in the 2013 Report, electricity distribution weights are 70% (non-labour) and 30% (labour). EPCOR also uses these weights. As discussed further below, the weights for electricity transmission utilities are 86% (non-labour) and 14% (labour). The inflation inputs are taken from publicly reported Statistics Canada data.

The following table shows the electricity distribution IPI for each year since the adoption of the 2-factor IPI for electricity distributors:

Electricity Distribution Inflation Factors from 2014 to 2021

Year	2014	2015	2016	2017	2018	2019	2020	2021	2022 (preliminary)
IPI	1.7%	1.6%	2.1%	1.9%	1.2%	1.5%	2.0%	2.2%	3.3%

Also, from 2007 to 2013, when the IPI was based solely on the GDP-IPI (FDD), the IPI ranged from 1.3% to 2.3%. The IPI has averaged around 2.0% since 2006. The Inflation Factor values for electricity distribution rate adjustment applications are shown in Appendix C. Natural gas inflation factors have used the GDP-IPI. A separate 2-factor IPI for electricity transmitters has only been in place since 2019.

[5] EB-2010-0379, *Report of the Board on Rate Setting Parameters and Benchmarking under the Renewed Regulatory Framework for Ontario's Electricity Distributors*, op. cit.

Preliminary Calculations of 2022 Inflation Factors

The following table summarizes the proposed 2022 IPI for electricity distribution and EPCOR for its labour and non-labour components and the corresponding 2021 IPI data as approved by the OEB last year:

Electricity Distribution

	Implicit Price Index for Gross Domestic Product[6] (Non-labour)		Average Weekly Earnings[7] (Labour)		IPI
	Annual % change	Weight	Annual % change	Weight	Annual % Change
2022 IPI (Preliminary)	1.7%	70%	7.0%	30%	3.3%
2021 IPI (Approved)	1.9%	70%	2.7%	30%	2.2%

For electricity transmitters (specifically Hydro One Sault Ste. Marie LP, Hydro One Networks, B2M LP, and NRLP, all under multi-year IRM plans), a sector-specific IPI is used. The transmission IPI uses the same Statistics Canada data but with different labour and non-labour weights, reflecting the fact that this sector is more capital-intensive and less labour-intensive than electricity distribution. As noted above, the 2022 IPI for electricity transmission is calculated to be 2.5%. The following two tables show the IPI for electricity transmission, as approved for Hydro One Networks and affiliated transmitters.

Electricity Transmission

	GDP-IPI (Non-labour)		AWE (Labour)		IPI
	Annual % change	Weight	Annual % change	Weight	Annual % Change
2022 IPI (Proposed)	1.7%	86%	7.0%	14%	2.5%
2021 IPI (Approved)	1.9%	86%	2.7%	14%	2.0%

The IPI in the tables above was calculated using the same formula as was used since 2014 and as documented in Appendices B and C of the 2013 Report. OEB staff conducted these preliminary calculations in June 2021. The data were extracted from StatsCan's website at that time.[8]

[6] Implicit Price Index for (National) Gross Domestic Product, Final Domestic Demand (GDP-IPI (FDD), typically shortened to GDP-IPI)
[7] Average Weekly Earnings (including overtime), Ontario, all businesses except uncategorized (AWE)
[8] It is common for StatsCan to make minor revisions to recent historical data with subsequent data issuances, reflecting more or corrected data. The AWE is an annual number; while StatsCan revised the data on July 29, 2021, it will not be revised. Quarterly GDP-IPI data, even for prior periods may be revised with the issuance of 2021 Q2 data at the end of August 2021. The OEB uses the most recently published StatsCan data available in the fall (October-November) of each year in order to set the inflation factors for rate adjustment applications for the following rate year.

The more detailed preliminary calculations of the electricity distribution and transmission 2022 inflation factors are provided in Appendix A. GDP-IPI data from 2001 to 2021 Q1 are documented in Appendix C. Annual AWE data are provided in Appendix D.

Reasons for the 2022 results

The tables above show an annual increase in AWE of 7.0%[9] from 2019 to 2020, which is driving the increase in the 2022 IPIs for electricity distributors, EPCOR and electricity transmitters.

April 2020 was the first full month following the declaration of the COVID-19 state of emergency and associated lockdown restrictions on residents and businesses. In its release of Labour Force Survey statistics for April 2020 (in June 2020), Statistics Canada included the following:[10]

> **Average weekly earnings increase as lower-paid workers are disproportionately affected by job losses**
>
> Total weekly payroll (including overtime) for all employees fell 6.0% in April, bringing the total cumulative decline since February to 11.1%. Average weekly earnings rose 6.1% in April to $1,112, partly the result of job losses being greater in sectors with relatively low average weekly earnings.

The overall impact was to shorten the left tail (i.e., lower wage earners) of the distribution of the active work force covered by the labour force survey, and thus moved the average weekly earnings of those remaining in the active work force higher relative to 2019. 2020 wage increases would be one factor in the year-over-year increase.

Similar messaging has continued with the issuance by Statistics Canada of monthly results of its Labour Force Survey and Survey of Employment, Payroll and Hours data, sometimes observing how easing of restrictions (often on a temporary basis, such as in

[9] Most annual percentage increases documented in this Fact Sheet are reported as logarithmic growth rates, calculated as growth rate of B relative to A = ln(B/A). This is a common approach used by economists and statisticians, and is done for consistency with the methodology adopted in the EB-2010-0379 Report, where the 2-factor IPI was introduced and used for Total Factor Productivity and cost benchmarking analyses to set the productivity factor for the current Incentive Rate-setting Framework. For growth rates close to zero, the logarithmic growth rate will closely track to the arithmetic growth rate.
[10] Statistics Canada, The Daily, June 25, 2020.

May to July 2020) did not majorly impact the rise in AWE and AHE.[11] As restrictions were reimposed in parts of Ontario and other provinces, late in 2020 and continuing into 2021, the disproportionate impact on the loss of lower income hourly wage earnings employees has continued into 2021.[12] On July 29, 2021, StatsCan stated the following in its The Daily publication of May 2021 labour data:

> ## Payroll employment, earnings and hours, and job vacancies, May 2021
>
> Payroll employment fell by 257,500 (-1.6%) in May, with much of the decline concentrated in service industries in Ontario. Average weekly earnings increased, as job losses were concentrated in lower-paying industries.
>
> In May, third-wave COVID-19 public health measures continued or were further tightened in several parts of the country. In Ontario, the stay-at-home order implemented on April 8 continued, affecting many non-essential businesses. Remote schooling, which began following the April spring break, also continued across the province.
>
> …
>
> **Average weekly earnings increase in May as job losses are concentrated in lower-paying industries**
>
> Average weekly earnings rose 0.9% from April to $1,138 in May, caused in part by the concentration of employment losses in lower-paying industries. The largest employment declines in May were in the two sectors with the lowest average weekly earnings: retail trade ($641 per week) and accommodation and food services ($457 per week).
>
> Average weekly earnings were 8.9% higher in May than in February 2020. This increase reflects a number of factors, including changes in the composition of employment by type of employee (hourly or salaried). For example, in the arts, entertainment and recreation sector, average weekly

[11] Statistics Canada, The Daily, July 30, 2020, August 27, 2020, September 24, 2020, October 29, 2020, November 26, 2020, December 22, 2020, January 28, 2021, February 25, 2021, March 30, 2021, April 29, 2021, May 27, 2021, June 24, 2021. For example, in the June 24, 2021 The Daily, StatsCan states: "This disproportionate loss of lower-wage employment has the effect of increasing average earnings." Each monthly issuance is for the month two months prior – i.e., the June issuance is for April data.
[12] Statistics Canada, The Daily, July 29, 2021.

earnings for all employees were 33.5% higher in May than in February 2020. This increase was driven in part by a significant shift in the relative share of hourly-paid and salaried employees in the sector. In May, hourly employees—who earned $498 per week on average, compared with $1,285 for salaried employees—made up two-thirds (67.2%) of payroll employment in the sector, a drop from just over three-quarters (76.8%) in February 2020.

Options Set Out in the OEB's Notice

As documented in the Notice issued by the OEB on August 6, 2021, the OEB is considering three options:

1. Proceed with the 2022 IPI updates using the current approved methodology
2. Approve the continued use of 2021 IPI values for 2022 rate adjustments
3. Update the 2022 inflation rates under the existing methodology using a suitable sub-index of Average Weekly Earnings or a related statistic, Average Hourly Earnings, that is more representative of labour inflation expected to be experienced by Utilities in 2022.

Under Option 3, OEB staff has identified four possible sub-indices at this time:

- Average Weekly Earnings (Ontario, all businesses except unclassified, Salaried employees, including overtime)
- Average Hourly Earnings (Ontario, all businesses except unclassified, Salaried employees, including overtime)
- Average Hourly Earnings (Ontario, all businesses except unclassified, Hourly wage employees, including overtime)
- Average Hourly Earnings (Ontario, all businesses except unclassified, fixed weight, excluding overtime)

The OEB also indicated that it will consider other options as presented by parties, with supporting rationale.

Proceed with the 2022 IPI updates using the current approved methodology

The first option set out in the Notice is to maintain the current approved methodology for the 2022 IPI updates. The inflation factors for electricity distribution and electricity transmission are due to be calculated with the issuance of 2021 Q2 National Economics Account data by Statistics Canada; this issuance is scheduled for August 31, 2021.

The annual percentage change of GDP-IPI, 2020 relative to 2019, is unlikely to change from the current estimate of 1.7% by more than 0.1 percentage points. This would not materially change the 2022 IPI from the estimates of 3.3% for electricity distribution and 2.5% for electricity transmission.

Approve the continued use of 2021 IPI values for 2022 rate adjustments

The second option identified in the Notice is to use the 2021 IPI values for the 2022 rate adjustments. This would result in an IPI of 2.2% for electricity distributors and EPCOR, 2.0% for electricity transmitters, and 2.0% for Enbridge. OEB is conducting this generic proceeding to set the values for the 2022 inflation factors. Retention of the 2021 inflation values for 2022 rate applications is an option, analogous to the option in the Cost of Capital report to retain the cost of capital parameters at existing values.[13]

Update the 2022 inflation rates under the existing methodology using a suitable sub-index of Average Weekly Earnings or a related statistic, Average Hourly Earnings, that is more representative of labour inflation expected to be experienced by Utilities in 2022

Under Option 3, as stated in the Notice of Application and in PO1, the OEB is also considering proceeding with the 2022 IPI update, but with an alternative sub-index of AWE or AHE in place of the current AWE (Ontario, All businesses excluding unclassified, including overtime). The choice of alternative sub-indices would be for similar indices, but which are not similarly impacted by the disproportionate change in the labour force from pandemic lockdown restrictions, and hence may provide better measures of wage inflation during the pandemic and as the economy recovers in 2021 and 2022.

Further information on the alternative statistics that OEB staff has identified for consideration are described in the next section, with historical data published by StatsCan provided in Appendices D, E and F.

[13] *Report of the Board on the Cost of Capital for Ontario's Regulated Utilities* (EB-2009-0084), December 11, 2009, p. 63

Related Statistics Canada and Bank of Canada Statistics

The OEB's approved 2-factor formula for electricity distributors, EPCOR, and transmitters for the inflation factor for rate adjustment applications depends solely on two specific statistics published by Statistics Canada, namely:

- Implicit Price Index for Gross Domestic Product (Final Domestic Demand)
- Average Weekly Earnings – Ontario, all businesses except unclassified, including overtime

These are not the only possible measures for assessing inflation generally, or for non-labour or labour inflation. The Consumer Price Index is in fact the most commonly reported measure of inflation, as experienced by end consumers (individuals and households). As the OEB has documented under Option 3 listed in the Notice of Application, there are some other statistics, typically sub-indices of GDP-IPI, AWE, or a related statistic, Average Hourly Earnings, which may be suitable. CPI and some of these sub-indices may be informative for understanding and assessing the reasonableness of the inflation factor update. In the context of the current proceeding, regarding how some statistics, particularly related to labour inflation, have been affected by pandemic-related business restrictions on the labour force, may also be informative and useful in determining how to control for COVID-19 related impacts, largely on labour inflation statistics, to set an inflation factor for 2022 rate adjustment applications that results in just and reasonable rates.

OEB staff provides some documentation on various inflation-related statistics publicly available from Statistics Canada and the Bank of Canada below. Tables of these statistics are provided in appendices to this Fact Sheet. OEB staff has prepared tables for the following indices in the appendices:

Appendix	Statistic	Sub-indices	Region
C	GDP-IPI	GDP-IPI (Final Domestic Demand)	Canada
D	AWE (variable weight)	All Businesses except unclassified, Utilities, Electric Utilities, Natural Gas Utilities, broken out by All Employees, Salaried Employees and Hourly Wage-earning Employees	Canada, Ontario
E	AHE (variable weight)	All Businesses except unclassified, Utilities, Electric Utilities, Natural Gas Utilities, further separated between Salaried and Hourly Wage-earning Employees	Canada, Ontario
F	Fixed Weight AHE	All Businesses except unclassified, Utilities	Canada, Ontario
G	CPI – Bank of Canada	CPI (All Items), CPI-trim, CPI-median, CPI-common	Canada
H	CPI – June 2021 (Statistics Canada)	CPI (All Items), CPI-trim, CPI-median, CPI-common (Annual change from June 2020 to June 2021)	Canada

Gross Domestic Product

The Implicit Price Index for National Gross Domestic Product (GDP-IPI) is used as the non-labour inflation component of the OEB's approved 2-factor inflation factor formula. The specific sub-index used is GDP-IPI (Final Domestic Demand). This specific sub-index was chosen as it had previously been used as the inflation factor for price cap rate adjustments for electricity distributors from 2007 to 2013. It is also used as the inflation factor for price cap rate adjustments for Enbridge, and for its pre-merger utilities, Enbridge Gas Distribution and Union Gas.

The Final Domestic Demand sub-index was chosen as being most representative of business output inflation on goods and services produced and consumed domestically.[14] This lessens how exchange rates and market prices for goods and services produced in Canada but exported would affect the implicit price inflation in GDP.

There are various sub-indices of GDP, but GDP-IPI (Final Domestic Demand) has been the measure long accepted by the OEB.

[14] GDP-IPI (FDD) was first selected as the inflation measure for IRM applications for electricity distributors for 2nd Generation IRM (EB-2006-0088). It was selected for natural gas distributors in the same time frame. GDP-IPI continued as the inflation measure for electricity distribution IRM for 3rd Generation IRM (EB-2007-0673), and was selected after consideration of alternatives, as the non-labour component of the 2-factor IPI for 4th Generation IRM (EB-2010-0379).

Provincial GDP statistics are available, but are significantly delayed (annual Provincial GDP data are available in about September of the following year, while National GDP, including price indices like GDP-IPI, are published two months following each quarter).

Average Weekly Earnings and Average Hourly Earnings

AWE[15] was chosen as part of the EB-2010-0379 consultation, in large part to address concerns of the industry and other stakeholders to include a specific measure of wage inflation.[16] There is a related measure, AHE, which measures, as the name implies, the average hourly earnings of employees.[17] Both AWE and AHE are derived from the ongoing Survey of Employment, Payrolls and Hours (SEPH) conducted monthly by StatsCan. Further, for both AWE and AHE, the data can be disaggregated by region (Canada or each province), with or without overtime, and in aggregate for all businesses excluding unclassified, or at various disaggregate levels by industry sectors. Utilities (water, natural gas and electric utilities) is one sector, with further disaggregation also for electric utilities and for natural gas utilities.[18]

OEB staff has reviewed various sub-indices of AWE and AHE as published by Statistics Canada. Further information is provided below, and Appendices D, E and H provide annual summarized statistics from current published Statistics Canada data. In addition to documenting the data for the total working labour force (All Businesses except for unclassified), data are provided for Utilities, Electricity Utilities and Natural Gas Utilities. Utilities includes water, natural gas and electric utilities. Data are also provided for Canada and Ontario, as available. "#NA" (Not available) are shown where the data, for the year or for any month in the year, are not reported due to confidentiality per the *Statistics Act*, small sample sizes, or unreliability of the data. It is primarily for more disaggregate sub-indices, such as at the Utility or lower levels of disaggregation, where unreported data typically occurs.

[15] AWE (Ontario, all businesses except unclassified, including overtime)
[16] The previous measure used for electricity distributors, and still used for Enbridge, GDP-IPI does capture the impacts of labour inflation implicitly. GDP is the value of goods and services produced in the economy, and the value of what is produced is driven by the costs of inputs to production – namely capital assets, materials and labour. Inflation in all of these inputs will be reflected in the year-over-year change (inflation rate) of the value of what is produced, subject to market forces.
[17] Average Hourly Earnings is available separately for hourly wage-earning employees and for salaried employees in dollar figures. AHE is available in aggregate, combining hourly wage and salaried employees, as a fixed weight index.
[18] However, the more disaggregate the data, the lower the precision of the estimates. StatsCan may also not publish statistics at some disaggregate levels if there is an insufficient number of firms in the sample; this is observed for the Ontario natural gas sector, with data being published only for a few sporadic years. However, the Ontario data would be included when aggregated with data for natural gas utilities from other provinces to calculate national results.

Average Weekly Earnings, Average Hourly Earnings (Salaried Employees), and Average Hourly Earnings (Hourly Wage Earning Employees)

AWE (Salaried employees), AHE (Salaried employees), and AHE (Hourly wage employees) each only reflect a sub-group of workers, and not the whole work force for which utilities must compete to acquire and retain their employees. OEB staff has not identified an overall AHE index that combines salaried and hourly wage, and other (i.e., gig and piece work) employees, except for the fixed weight index discussed later.

AWE (Salaried employees) and AHE (Salaried employees) may be reasonable comparators for labour statistics for utilities, as many utility employees would be in the salaried category, either management or represented by collective bargaining units. As noted by Statistics Canada, salaried employees were less impacted by COVID-19 restrictions. However, the majority of the work force in the economy as a whole is still represented by hourly wage-earning employees.

AWE and AHE are related statistics and are derived from the same data sources (the Labour Force Survey and the Survey of Employment, Payrolls and Hours). AHE is derived from AWE by dividing by the average number of hours worked, and thus controls for one source of volatility in AWE – namely year-over-year changes in the average number of hours worked by employees in a typical week.

Average Hourly Earnings (Hourly Wage Earning Employees) is a sub-index of AHE that focuses on the average hourly earnings of workers paid by hourly wages. It has the same attributes of AHE for salaried employees discussed above. However, hourly wage earning employees make up the majority of work force overall, and in many business sectors.

As noted above, AHE (hourly wage earning employees) is often not reported at more disaggregate levels due to small sample sizes and the unreliability of the data. Also, AHE (hourly wage-earning employees) is amongst the most impacted by COVID-19 business restrictions since the onset of the pandemic, and the gradual re-opening of the economy because it is this segment of the labour force that lost jobs temporarily or permanently. Current statistics show that the work force recovery is more gradual even as the economy is re-opening.[19]

[19] See, for example, Statistics Canada, The Daily, July 29, 2021. Also, provided on page 9.

Average Hourly Earnings (Fixed Weight)

Average Hourly Earnings (fixed weight) is a fixed weight index that combines salaried and hourly wage employees, but uses fixed weights for all years, for aggregating data across business sectors and between salaried and hourly wage employees; the weights reflect a 2005 year. Statistics Canada provides the following documentation on the fixed weight AHE statistic:[20]

> Fixed-weighted earnings index: The fixed-weighted average hourly and weekly earnings indices have been constructed to better reflect the underlying changes in earnings by holding hours paid and employment composition among industries, provinces and territories and type of employee (hourly paid and fixed salary employees) constant through time. At present, the fixed weights (basket) are based on the 2005 annual SEPH data. The base year, which is the year in which the indices are equal to 100, is 2002.
>
> Overtime hours and pay could skew the assessment of underlying wage trends since they tend to be volatile; therefore, overtime components are excluded from the calculation of the indices.
>
> These indices are better indicators of the underlying trends in wage rates than the variable-weighted earnings series. They are useful for monitoring inflation due to wages, regardless of structural changes in employment.
>
> Table 14-10-0213-01 provides a monthly fixed-weighted index of average hourly earnings for all employees, excluding overtime, by 2-digit NAICS industries.

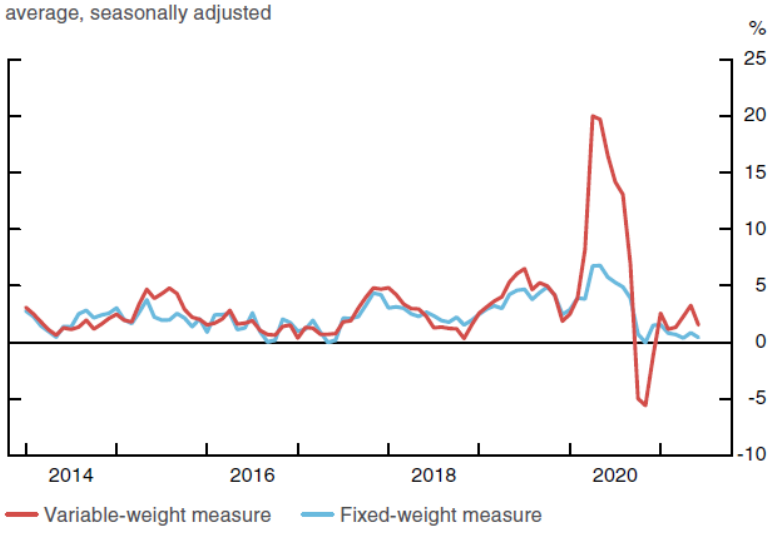
As noted by Statistics Canada, the intention is to create a statistic that more directly measures wage inflation, and is less impacted by other factors (e.g., fluctuations in overtime, changes in workforce composition, and by capital/labour substitution). With fixed weights from a pre-pandemic period (2005), any impacts of the pandemic are avoided.

[20] Statistics Canada, Guide to the Survey of Employment, Payroll and Hours, (revised March 30, 2021) https://www150.statcan.gc.ca/n1/pub/72-203-g/72-203-g2021001-eng.htm

In its most recent Monetary Policy Report, the Bank of Canada makes the following observations regarding variable-weight and fixed-weight AHE statistics as measures of labour inflation during the pandemic:[21]

Chart 11: Measures of wage inflation remain subdued

Month-over-month percentage change in hourly wages, annualized, 6-month moving average, seasonally adjusted



Note: The variable-weight measure is the average hourly wages of employees, as reported in Statistics Canada's Labour Force Survey (LFS). The fixed-weight measure, also based on the LFS, is constructed using 2019 employment weights for wages based on employees' job status (full or part time), job permanency (permanent or temporary), industry of employment and occupation.

Sources: Statistics Canada and Bank of Canada calculations Last observation: June 2021

> Measures of wage inflation remain subdued (**Chart 11**). Swings in the number of workers in low-paying jobs during the pandemic have been making these measures volatile. Variable-weight measures have fluctuated the most, with high rates of wage growth when employment in low-wage jobs dropped. Wage measures that are less influenced by such composition effects, including fixed-weight measures, have been more stable.

Data for the fixed weight AHE published by Statistics Canada are provided in Appendix F. OEB staff has converted the monthly index data into annual results by simple averaging of the monthly results for the year.

[21] Bank of Canada, Monetary Policy Report, July 14, 2021, p. 16

OEB staff also note that this fixed weight AHE appears to be one statistic that is forecasted in *Consensus Forecasts*.[22] The most recent monthly publication of *Consensus Forecasts*, provides the following forecasts for the annual percentage change in AHE, along with recent historical actuals:[23]

Annual Percentage Change in Average Hourly Earnings

Year	2017	2018	2019	2020	2021	2022
	Actuals				*Forecasts*	
	2.1	2.2	2.6	3.6	*2.8*	*2.4*

Consumer Price Index

The most common measure of inflation familiar to the lay public is the Consumer Price Index (CPI). This is the measure most frequently reported by government, and in the media.

CPI is a measure of inflation as experienced by end consumers, based on a typical basket of goods and services that they purchase. CPI is measured and reported monthly, and aggregated into quarterly and annual statistics. CPI is available for a total basket of goods (All items) and for various sub-components. The basket of goods is fixed for a period of time, so that CPI measures price inflation of that basket of goods, and is updated every five years. In this sense, CPI is a general measure of inflation.

CPI can exhibit volatility for a period, influenced by factors such as currency exchange rates, international market price movements (i.e., oil and gas commodities), and demand-supply surpluses and shortages in markets (i.e., weather impacts on food and crop production).[24]

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[22] *Consensus Forecasts* is a monthly subscription publication of Consensus Economics Inc., a London-based economics consulting firm that conducts monthly surveys of major and reputable economic forecasting firms and institutions in each country, to provide short-term forecasts of key economic statistics for that country. The "consensus forecast" is the average of all provided survey results for each macroeconomic indicator. The monthly publication provides recent historical data (for Canada, as published by Statistics Canada), tables of the monthly forecasts, and brief analyses of the political and economic climate in the country, as well as key socioeconomic drivers that influence the results. The OEB subscribes to *Consensus Forecasts*, and uses data from *Consensus Forecasts* for its annual cost of capital parameter updates going back to 1997.

[23] *Consensus Forecasts*, August 9, 2021, p. 16. *Consensus Forecasts* does not identify the specific AHE statistic or sub-index used. However, analysis by OEB staff shows that the historical annual percentage change reported by *Consensus Forecasts* as historical actuals corresponds with the annual percentage change of the StatsCan fixed-weight AWE for Canada, all employees, when calculated using the arithmetic growth rate formula.

[24] For example, in the Statistics Canada The Daily, August 18, 2021, on the CPI, July 2021, Statistics Canada included a text box titled 'Spotlight on food prices.'.

Recognizing the volatility that CPI (All items) may exhibit, the Bank of Canada focuses on three sub-indices of CPI (which the Bank of Canada refers to as Core Inflation Measures): [25]

- CPI-trim
- CPI-median
- CPI-common

Each of these measures does not eliminate all volatility, but when looked at together, these central CPI sub-indices are less affected by volatile price movements. This is particularly the case during sudden economic swings and crises, including the current COVID-19 pandemic.

Although CPI is not typically used as a measure of inflation directly related to the utility sector, for Informational purposes OEB staff has provided data on CPI (All items), CPI-trim, CPI-median and CPI-common in Appendices G and H, as these sub-indices may be informative for understanding and assessing the reasonableness of the inflation factor update.

[25] Bank of Canada, https://www.bankofcanada.ca/rates/price-indexes/cpi/#cpi-trim . The Bank of Canada's Core Inflation Measures are also published by Statistics Canada

Explanation of the Appendices

Data from Statistics Canada and the Bank of Canada are provided in Appendices C through H. References to the source Statistics Canada table are provided. OEB staff notes that various series are provided in annual, quarterly or monthly series. OEB staff have aggregated quarterly (monthly) statistics into annual numbers by averaging the quarterly (monthly) statistics, as it is the annual data which are the most useful for the purposes of calculating annual inflation rates.

OEB staff has also generally calculated the year-over-year change, using the logarithmic growth rate function:

$$\Delta\%X \cong \ln\left(\frac{X_t}{X_{t-1}}\right)$$

This is a standard econometric approach, and is done for consistency with the econometric Total Factor Productivity and cost benchmarking analyses from the 4th Generation IRM consultation.

OEB staff have documented the calculations they have done under "OEB Staff Notes" following each set of tables. Other Notes or Footnotes are from Statistics Canada.

Appendix A: Tables of 2022 Preliminary Electricity Distribution and Transmission Inflation Factors

Electricity Distribution – 2022 Inflation Factor (Preliminary Calculations)

Inputs and Assumptions												
Year	Non-Labour GDP-IPI (FDD) - National							Labour AWE - All Employees - Ontario			Resultant Values - Annual Growth for the 2-factor IPI	
	Q1	Q2	Q3	Q4	Annual	Annual % Change	Weight	Annual	Annual % Change	Weight	Annual	Annual % Change
2019	111.2	111.8	112.1	112.9	112			$ 1,049.73			108.6	
2020	113.3	113.5	114.1	114.8	113.93	**1.704%**	**70%**	$ 1,126.30	**7.040%**	**30%**	**112.2**	**3.3%**

Sources:

- GDP-IPI (FDD): Statistics Canada, Table 36-10-0106-01 (formerly CANSIM 380-0066) - Price Indexes, gross domestic product, quarterly (2012 = 100 unless otherwise noted) - 2021 Q1, data accessed June 8, 2021
- Average Weekly Earnings (AWE): Statistics Canada, Table 14-10-0204-01 (formerly CANSIM 281-0027), Ontario, all businesses excluding unclassified, annual (current dollars), data accessed June 8, 2021

OEB Staff Notes:

1. Annual GDP-IPI values calculated as average of StatsCan-published quarterly index values .
2. Logarithmic percentages calculated by OEB staff from StatsCan data based on the formula

Annual Percentage Change (XI) = $\ln(X_t/X_{t-1})$

Electricity Transmission – 2022 Inflation Factor (Preliminary Calculations)

Inputs and Assumptions												
Year	Non-Labour GDP-IPI (FDD) - National							Labour AWE - All Employees - Ontario			Resultant Values - Annual Growth for the 2-factor IPI	
	Q1	Q2	Q3	Q4	Annual	Annual % Change	Weight	Annual	Annual % Change	Weight	Annual	Annual % Change
2019	111.2	111.8	112.1	112.9	112			$ 1,049.73			108.4	
2020	113.3	113.5	114.1	114.8	113.925	**1.7%**	**86%**	$ 1,126.30	**7.0%**	**14%**	**111.1**	**2.5%**

Sources:

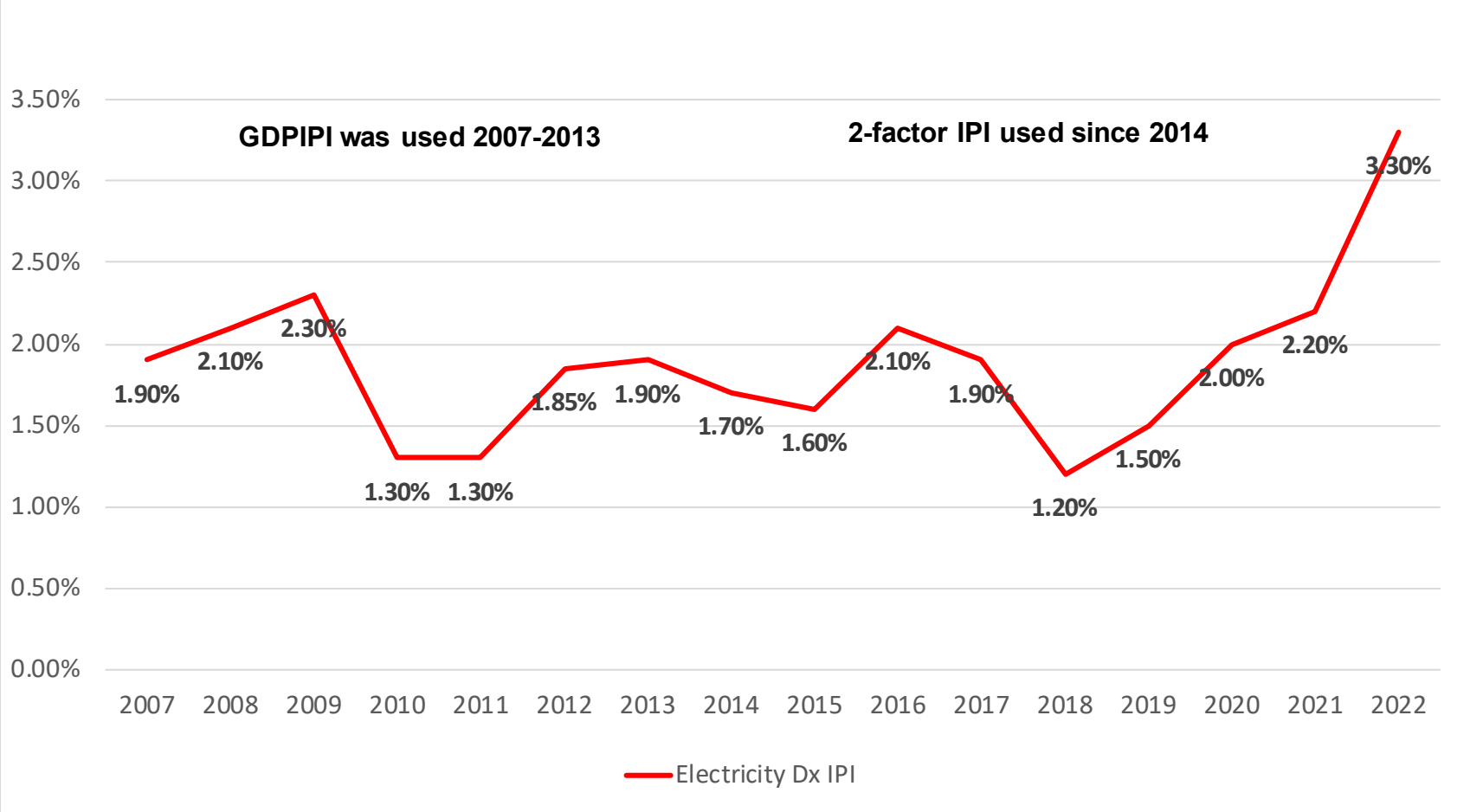
- GDP-IPI (FDD): Statistics Canada, Table 36-10-0106-01 (formerly CANSIM 380-0066) - Price Indexes, gross domestic product, quarterly (2012 = 100 unless otherwise noted) - 2021 Q1, data accessed June 8, 2021
- Average Weekly Earnings (AWE): Statistics Canada, Table 14-10-0204-01 (formerly CANSIM 281-0027), Ontario, all businesses excluding unclassified, annual (current dollars), data accessed June 8, 2021

OEB Staff Notes:

1. Annual GDP-IPI values calculated as average of StatsCan-published quarterly index values
2. Logarithmic percentages calculated by OEB staff from StatsCan data based on the formula

Annual Percentage Change (XI) = $\ln(X_t/X_{t-1})$

Appendix B: Electricity Distribution Inflation Factors 2007-2022



Note: 2022 value based on preliminary calculation.

Source: Ontario Energy Board. EB-2019-0018, Exhibit K3.1/Tab 2. For 2020 and 2021 IPIs, see the 2020 EDR and 2021 EDR pages on the OEB's website.

Appendix C: Implicit Price Index of National Gross Domestic Product (GDP-IPI)

Gross Domestic Product, Implicit Price Index (Final Domestic Demand)

	Quarter					Annual Percentage
Year	Q1	Q2	Q3	Q4	Annual	Change
2001	80.4	81.1	81.2	81.5	81.05	
2002	82	82.5	83.3	83.9	82.925	2.3%
2003	84.1	83.9	84.5	84.5	84.25	1.6%
2004	85	85.8	86	86.2	85.75	1.8%
2005	86.8	87.4	87.9	88.1	87.55	2.1%
2006	88.7	89.4	89.9	90.2	89.55	2.3%
2007	91.2	91.8	91.9	92	91.725	2.4%
2008	92.7	93.7	94.8	95	94.05	2.5%
2009	95	94.9	95	95.5	95.1	1.1%
2010	95.5	95.8	96.3	96.8	96.1	1.0%
2011	97.4	98.1	98.7	99.3	98.375	2.3%
2012	99.5	99.9	100.1	100.5	100	1.6%
2013	101.1	101.3	102	102.4	101.7	1.7%
2014	103.2	103.9	104.3	104.8	104.05	2.3%
2015	105.1	105.4	106	106.3	105.7	1.6%
2016	106.5	106.5	106.9	107.4	106.825	1.1%
2017	107.9	108.3	108.1	108.9	108.3	1.4%
2018	109.2	109.7	110.4	110.7	110	1.6%
2019	111.2	111.8	112.1	112.9	112	1.8%
2020	113.3	113.5	114.1	114.8	113.925	1.7%
2021	116.1					

Statistics Canada. Table 36-10-0106-01 Gross domestic product price indexes, quarterly
https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3610010601
DOI: https://doi.org/10.25318/3610010601-eng

OEB Staff Notes:

4. Annual values calculated as the arithmetic average of quarterly values
5. Logarithmic percentages calculated by OEB staff from StatsCan data based on the formula

Annual Percentage Change (GDPIPI) = $\ln(GDPIPI_t/GDPIPI_{t-1})$

Appendix D: Tables of Average Weekly Earnings (Annual) – Statistics Canada Data

Average weekly earnings by industry, annual [1 2 3 4]
Table: 14-10-0204-01 (formerly CANSIM 281-0027)
Release date: 2021-07-29

Canada

	All employees [5]				Salaried employees paid a fixed salary				Employees paid by the hour			
	Including overtime				Including overtime				Including overtime			
Reference period	Industrial aggregate excluding unclassified businesses [6 7]	Utilities	Electric power generation, transmission and distribution	Natural gas distribution	Industrial aggregate excluding unclassified businesses [6 7]	Utilities	Electric power generation, transmission and distribution	Natural gas distribution	Industrial aggregate excluding unclassified businesses [6 7]	Utilities	Electric power generation, transmission and distribution	Natural gas distribution
	Current dollars											
2001	657.28	1159.34	1204.63	1039	872.38	1241.03	1272.6	1180.85	507.37	1158.25	1226.57	914.18
2002	673.09	1236.17	1276.83	1121.4	892.99	1282.14	1297.26	1274.99	512.61	1241.25	1300.11	1020.56
2003	691.17	1275.33	1323.4	1147.8	916.1	1323.81	1339.57	1325.81	531.87	1286.38	1343.03	1082.48
2004	709.3	1261.08	1328.76	1076.8	947.07	1314.18	1356.41	1217.8	546.75	1254.66	1323.16	1015.91
2005	737.04	1294.4	1376.13	1090.77	978.85	1356.87	1413.84	1240.65	563.74	1260.13	1344.66	980.79
2006	755.14	1344.06	1417.14	1159.93	999.57	1419.18	1463.81	1334.58	577.88	1307.27	1379.54	1068.95
2007	787.57	1409.99	1483.05	1242.63	1045.94	1491.25	1540.02	1403.59	592.9	1337.22	1429.58	1110.99
2008	810.2	1424.74	1491.06	1318.59	1082.82	1529.25	1588.19	1437.45	612.52	1340.26	1409.68	1226.03
2009	822.51	1500.74	1547.96	1535.2	1100	1703.61	1727.5	1759.05	614.87	1344.5	1405.32	1289.41
2010	852.44	1569.51	1616.29	1628.5	1147.37	#N/A	#N/A	1705.86	634.27	#N/A	#N/A	1347.25
2011	873.64	1643.66	1705.56	1615.81	1167.08	1787.25	#N/A	#N/A	662.19	1496.83	#N/A	#N/A
2012	895.56	1641.14	1707.44	1540.61	1196.62	1793.61	#N/A	1633.98	681.57	1556.21	#N/A	1286.2
2013	911.44	1652.08	1688.13	1732.31	1220.26	1828.25	1839.6	1890.58	695.44	1485.95	1534.95	1517.29
2014	935.52	1775.57	1847.5	1759.94	1264.86	1904.77	1929.49	1984.86	708.27	1689.29	1787.47	1520.6
2015	952.21	1790.22	1839.86	1834.25	1282.53	1922.62	1931.49	2088.16	719.51	1677.83	1778.31	1330.55
2016	956.8	1737.42	1785.06	1854.52	1301.26	1934.46	#N/A	#N/A	721.44	1572.41	#N/A	#N/A
2017	976.17	1862.48	1920.16	1883.76	1328.55	#N/A	#N/A	#N/A	731.05	#N/A	#N/A	#N/A
2018	1001.26	1879.76	1918.38	2000.32	1358.22	1980.94	1978.73	#N/A	756	1756.47	1826.12	#N/A
2019	1028.3	1890.98	1925.91	2023.33	1392.29	2101.23	2119.32	#N/A	774.81	1731.87	1786.05	#N/A
2020	1096.62	1910.42	1941.28	2002.88	1436.91	#N/A	#N/A	#N/A	840.49	#N/A	#N/A	#N/A

Canada												
	All employees [5]				Salaried employees paid a fixed salary				Employees paid by the hour			
	Including overtime				Including overtime				Including overtime			
Reference period	Industrial aggregate excluding unclassified businesses [6 7]	Utilities	Electric power generation, transmission and distribution	Natural gas distribution	Industrial aggregate excluding unclassified businesses [6 7]	Utilities	Electric power generation, transmission and distribution	Natural gas distribution	Industrial aggregate excluding unclassified businesses [6 7]	Utilities	Electric power generation, transmission and distribution	Natural gas distribution
	Annual Percentage Change (Logarithmic)											
2001												
2002	2.4%	6.4%	5.8%	7.6%	2.3%	3.3%	1.9%	7.7%	1.0%	6.9%	5.8%	11.0%
2003	2.7%	3.1%	3.6%	2.3%	2.6%	3.2%	3.2%	3.9%	3.7%	3.6%	3.2%	5.9%
2004	2.6%	-1.1%	0.4%	-6.4%	3.3%	-0.7%	1.2%	-8.5%	2.8%	-2.5%	-1.5%	-6.3%
2005	3.8%	2.6%	3.5%	1.3%	3.3%	3.2%	4.1%	1.9%	3.1%	0.4%	1.6%	-3.5%
2006	2.4%	3.8%	2.9%	6.1%	2.1%	4.5%	3.5%	7.3%	2.5%	3.7%	2.6%	8.6%
2007	4.2%	4.8%	4.5%	6.9%	4.5%	5.0%	5.1%	5.0%	2.6%	2.3%	3.6%	3.9%
2008	2.8%	1.0%	0.5%	5.9%	3.5%	2.5%	3.1%	2.4%	3.3%	0.2%	-1.4%	9.9%
2009	1.5%	5.2%	3.7%	15.2%	1.6%	10.8%	8.4%	20.2%	0.4%	0.3%	-0.3%	5.0%
2010	3.6%	4.5%	4.3%	5.9%	4.2%	#N/A	#N/A	-3.1%	3.1%	#N/A	#N/A	4.4%
2011	2.5%	4.6%	5.4%	-0.8%	1.7%	#N/A	#N/A	#N/A	4.3%	#N/A	#N/A	#N/A
2012	2.5%	-0.2%	0.1%	-4.8%	2.5%	0.4%	#N/A	#N/A	2.9%	3.9%	#N/A	#N/A
2013	1.8%	0.7%	-1.1%	11.7%	2.0%	1.9%	#N/A	14.6%	2.0%	-4.6%	#N/A	16.5%
2014	2.6%	7.2%	9.0%	1.6%	3.6%	4.1%	4.8%	4.9%	1.8%	12.8%	15.2%	0.2%
2015	1.8%	0.8%	-0.4%	4.1%	1.4%	0.9%	0.1%	5.1%	1.6%	-0.7%	-0.5%	-13.4%
2016	0.5%	-3.0%	-3.0%	1.1%	1.4%	0.6%	#N/A	#N/A	0.3%	-6.5%	#N/A	#N/A
2017	2.0%	7.0%	7.3%	1.6%	2.1%	#N/A	#N/A	#N/A	1.3%	#N/A	#N/A	#N/A
2018	2.5%	0.9%	-0.1%	6.0%	2.2%	#N/A	#N/A	#N/A	3.4%	#N/A	#N/A	#N/A
2019	2.7%	0.6%	0.4%	1.1%	2.5%	5.9%	6.9%	#N/A	2.5%	-1.4%	-2.2%	#N/A
2020	6.4%	1.0%	0.8%	-1.0%	3.2%	#N/A	#N/A	#N/A	8.1%	#N/A	#N/A	#N/A

Ontario

	All employees [5]				Salaried employees paid a fixed salary				Employees paid by the hour			
	Including overtime				Including overtime				Including overtime			
Reference period	Industrial aggregate excluding unclassified businesses [6 7]	Utilities	Electric power generation, transmission and distribution	Natural gas distribution	Industrial aggregate excluding unclassified businesses [6 7]	Utilities	Electric power generation, transmission and distribution	Natural gas distribution	Industrial aggregate excluding unclassified businesses [6 7]	Utilities	Electric power generation, transmission and distribution	Natural gas distribution
	Current dollars											
2001	696.09	1306.79	1396.59	#N/A	919.76	1367.29	1425.23	#N/A	539.66	1304.77	1410.73	#N/A
2002	711.29	1385.59	1479.41	#N/A	937.46	1451.87	1508.51	#N/A	542.58	1370.88	1468.72	#N/A
2003	728.71	1441.31	1557.13	1167.97	958.25	1539.66	1623.36	#N/A	562.26	1436.85	1522.37	#N/A
2004	748.99	1420.13	1550.25	1063.75	988.19	1531.18	1665.29	#N/A	581.91	1396.65	1475.93	#N/A
2005	776.33	1449.84	1608.64	1049.49	1025.3	1590.08	1777.14	#N/A	591.77	1402.4	1503.8	#N/A
2006	788.8	1488.34	1632.9	1099.27	1041	1651.37	1819.6	#N/A	600.03	1430.94	1516.44	#N/A
2007	819.19	1577.41	1717.71	1240.48	1082.99	1745.59	1935.46	#N/A	611.5	1472.77	1590.08	#N/A
2008	838.34	1544.3	1650.55	1319.02	1118.3	1707.93	1851.79	#N/A	625.11	1436.43	1522.66	#N/A
2009	848.77	1672.72	1753.63	1660.69	1139.76	1887.97	#N/A	#N/A	611.52	1514.11	#N/A	#N/A
2010	881.36	1680.01	1747.81	#N/A	1188.92	#N/A	#N/A	#N/A	633.46	#N/A	#N/A	#N/A
2011	893.4	1714.92	1810.92	#N/A	1199.35	1919.3	#N/A	#N/A	659.54	1541.87	#N/A	#N/A
2012	906.1	1707.11	1818.34	#N/A	1221.36	1915.57	#N/A	#N/A	671.07	1617.3	#N/A	#N/A
2013	920.09	1758.79	1835.88	#N/A	1241.68	#N/A	#N/A	#N/A	677.7	#N/A	#N/A	#N/A
2014	938.5	1915.37	2044.49	1763.54	1274.77	2039.84	#N/A	#N/A	686.62	1832	#N/A	#N/A
2015	963.37	1930.69	2030.68	#N/A	1292.29	#N/A	#N/A	#N/A	705.94	#N/A	#N/A	#N/A
2016	974.41	1820.71	1905.3	#N/A	1321.02	#N/A	#N/A	#N/A	717.1	#N/A	#N/A	#N/A
2017	993.23	1924.73	2003.33	#N/A	1348.26	#N/A	#N/A	#N/A	720.14	#N/A	#N/A	#N/A
2018	1022	1939.84	1981.16	#N/A	1385.48	2015.98	2009.37	#N/A	745.8	1828.91	1896.72	#N/A
2019	1049.73	1995.31	2037.1	#N/A	1420.18	#N/A	2266.58	#N/A	764.74	#N/A	1877.5	#N/A
2020	1126.3	1982.52	2011.23	#N/A	1470.2	#N/A	#N/A	#N/A	834.04	#N/A	#N/A	#N/A

Ontario

	All employees [5]				Salaried employees paid a fixed salary				Employees paid by the hour			
	Including overtime				Including overtime				Including overtime			
Reference period	Industrial aggregate excluding unclassified businesses [6 7]	Utilities	Electric power generation, transmission and distribution	Natural gas distribution	Industrial aggregate excluding unclassified businesses [6 7]	Utilities	Electric power generation, transmission and distribution	Natural gas distribution	Industrial aggregate excluding unclassified businesses [6 7]	Utilities	Electric power generation, transmission and distribution	Natural gas distribution
	Annual Percentage Change (Logarithmic)											
2001												
2002	2.2%	5.9%	5.8%	#N/A	1.9%	6.0%	5.7%	#N/A	0.5%	4.9%	4.0%	#N/A
2003	2.4%	3.9%	5.1%	#N/A	2.2%	5.9%	7.3%	#N/A	3.6%	4.7%	3.6%	#N/A
2004	2.7%	-1.5%	-0.4%	-9.3%	3.1%	-0.6%	2.6%	#N/A	3.4%	-2.8%	-3.1%	#N/A
2005	3.6%	2.1%	3.7%	-1.3%	3.7%	3.8%	6.5%	#N/A	1.7%	0.4%	1.9%	#N/A
2006	1.6%	2.6%	1.5%	4.6%	1.5%	3.8%	2.4%	#N/A	1.4%	2.0%	0.8%	#N/A
2007	3.8%	5.8%	5.1%	12.1%	4.0%	5.5%	6.2%	#N/A	1.9%	2.9%	4.7%	#N/A
2008	2.3%	-2.1%	-4.0%	6.1%	3.2%	-2.2%	-4.4%	#N/A	2.2%	-2.5%	-4.3%	#N/A
2009	1.2%	8.0%	6.1%	23.0%	1.9%	10.0%	#N/A	#N/A	-2.2%	5.3%	#N/A	#N/A
2010	3.8%	0.4%	-0.3%	#N/A	4.2%	#N/A	#N/A	#N/A	3.5%	#N/A	#N/A	#N/A
2011	1.4%	2.1%	3.5%	#N/A	0.9%	#N/A	#N/A	#N/A	4.0%	#N/A	#N/A	#N/A
2012	1.4%	-0.5%	0.4%	#N/A	1.8%	-0.2%	#N/A	#N/A	1.7%	4.8%	#N/A	#N/A
2013	1.5%	3.0%	1.0%	#N/A	1.7%	#N/A	#N/A	#N/A	1.0%	#N/A	#N/A	#N/A
2014	2.0%	8.5%	10.8%	#N/A	2.6%	#N/A	#N/A	#N/A	1.3%	#N/A	#N/A	#N/A
2015	2.6%	0.8%	-0.7%	#N/A	1.4%	#N/A	#N/A	#N/A	2.8%	#N/A	#N/A	#N/A
2016	1.1%	-5.9%	-6.4%	#N/A	2.2%	#N/A	#N/A	#N/A	1.6%	#N/A	#N/A	#N/A
2017	1.9%	5.6%	5.0%	#N/A	2.0%	#N/A	#N/A	#N/A	0.4%	#N/A	#N/A	#N/A
2018	2.9%	0.8%	-1.1%	#N/A	2.7%	#N/A	#N/A	#N/A	3.5%	#N/A	#N/A	#N/A
2019	2.7%	2.8%	2.8%	#N/A	2.5%	#N/A	12.0%	#N/A	2.5%	#N/A	-1.0%	#N/A
2020	7.0%	-0.6%	-1.3%	#N/A	3.5%	#N/A	#N/A	#N/A	8.7%	#N/A	#N/A	#N/A

Footnotes:

1 The quality indicators take into account various factors that affect the quality of the data, notably the CV, the non-response errors and the imputation errors. Quality indicators indicate the following: A - Excellent; B - Very good; C - Good; D - Acceptable; E - Use with caution; F - Too unreliable to publish or sample size is too small to produce reliable estimates.

2 The introduction of administrative data in 2001 and the associated change in methodology resulted in level shifts for some series. This affects the comparability of pre- and post-2001 estimates.
3 Earnings data are based on gross payroll before source deductions.
4 Industry estimates in this table are based on the 2017 North American Industry Classification System (NAICS) Version 3.0.
5 "All employees" is the sum of employees paid by the hour, salaried employees and other employees.
6 Industrial aggregate covers all industrial sectors except those primarily involved in agriculture, fishing and trapping, private household services, religious organisations and the military personnel of the defence services.
7 Unclassified businesses (00) are businesses for which the industrial classification (North American Industry Classification System [NAICS] 2017 Version 3.0) has yet to be determined.

OEB Staff Notes:
#NA [OEB staff] NA (Not Available) reflects statistics not reported by Statistics Canada for the year for the following reasons: 1) not available for a specific reference period; 2) suppressed to meet confidentiality requirements of the Statistics Act; or 3) too unreliable to be reported.
Logarithmic percentages calculated by OEB staff from StatsCan data based on the formula
Annual Percentage Change (AWE) = $\ln(AWE_t/AWE_{t-1})$

Statistics Canada. Table 14-10-0204-01 Average weekly earnings by industry, annual
https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410020401
DOI: https://doi.org/10.25318/1410020401-eng

Appendix E: Tables of Average Hourly Earnings (Annual) – Statistics Canada Data

Average hourly earnings for employees paid by the hour, by industry, annual [1] [2] [3] [4]

	Canada				Ontario			
	Including overtime				Including overtime			
Reference period	Industrial aggregate excluding unclassified businesses [5] [6]	Utilities	Electric power generation, transmission and distribution	Natural gas distribution	Industrial aggregate excluding unclassified businesses [5] [6]	Utilities	Electric power generation, transmission and distribution	Natural gas distribution
	Current dollars							
2001	16.34	29.14	30.35	24.57	17.03	32.06	33.83	#N/A
2002	16.66	30.82	31.8	27.36	17.32	33.83	35.31	#N/A
2003	17.18	32.79	33.96	28.81	17.88	35.78	37.3	#N/A
2004	17.69	32.58	34.31	26.32	18.4	35.64	37.26	#N/A
2005	18.29	32.85	34.7	26.16	18.84	36.2	38.15	#N/A
2006	18.75	33.45	34.95	27.99	19.2	36.83	38.22	#N/A
2007	19.49	34.51	36.27	29.85	19.83	37.96	39.75	#N/A
2008	20.18	34.51	35.95	32.93	20.3	37.33	38.93	#N/A
2009	20.45	34.71	35.94	34.08	20.22	38.38	#N/A	#N/A
2010	20.95	#N/A	#N/A	36.39	20.86	#N/A	#N/A	#N/A
2011	21.74	37.26	#N/A	#N/A	21.64	37.77	#N/A	#N/A
2012	22.26	38.52	#N/A	34.37	21.95	39.35	#N/A	#N/A
2013	22.85	38.18	39.31	38.64	22.41	#N/A	#N/A	#N/A
2014	23.26	42.05	43.73	39.82	22.74	44.31	#N/A	#N/A
2015	23.57	41.64	43.22	36.47	23.11	#N/A	#N/A	#N/A
2016	23.85	40.43	#N/A	#N/A	23.69	#N/A	#N/A	#N/A
2017	24.26	#N/A	#N/A	#N/A	23.96	#N/A	#N/A	#N/A
2018	25.06	42.82	43.66	#N/A	24.73	43.67	44.39	#N/A
2019	25.73	43.28	44.46	#N/A	25.54	#N/A	46.47	#N/A
2020	26.97	#N/A	#N/A	#N/A	26.64	#N/A	#N/A	#N/A

Average hourly earnings for employees paid by the hour, by industry, annual [1 2 3 4]

	Canada				Ontario			
	Including overtime				Including overtime			
Reference period	Industrial aggregate excluding unclassified businesses [5 6]	Utilities	Electric power generation, transmission and distribution	Natural gas distribution	Industrial aggregate excluding unclassified businesses [5 6]	Utilities	Electric power generation, transmission and distribution	Natural gas distribution
	Annual Percentage Change (logarithmic)							
2001								
2002	1.9%	5.6%	4.7%	10.8%	1.7%	5.4%	4.3%	#N/A
2003	3.1%	6.2%	6.6%	5.2%	3.2%	5.6%	5.5%	#N/A
2004	2.9%	-0.6%	1.0%	-9.0%	2.9%	-0.4%	-0.1%	#N/A
2005	3.3%	0.8%	1.1%	-0.6%	2.4%	1.6%	2.4%	#N/A
2006	2.5%	1.8%	0.7%	6.8%	1.9%	1.7%	0.2%	#N/A
2007	3.9%	3.1%	3.7%	6.4%	3.2%	3.0%	3.9%	#N/A
2008	3.5%	0.0%	-0.9%	9.8%	2.3%	-1.7%	-2.1%	#N/A
2009	1.3%	0.6%	0.0%	3.4%	-0.4%	2.8%	#N/A	#N/A
2010	2.4%	#N/A	#N/A	6.6%	3.1%	#N/A	#N/A	#N/A
2011	3.7%	#N/A	#N/A	#N/A	3.7%	#N/A	#N/A	#N/A
2012	2.4%	3.3%	#N/A	#N/A	1.4%	4.1%	#N/A	#N/A
2013	2.6%	-0.9%	#N/A	11.7%	2.1%	#N/A	#N/A	#N/A
2014	1.8%	9.7%	10.7%	3.0%	1.5%	#N/A	#N/A	#N/A
2015	1.3%	-1.0%	-1.2%	-8.8%	1.6%	#N/A	#N/A	#N/A
2016	1.2%	-2.9%	#N/A	#N/A	2.5%	#N/A	#N/A	#N/A
2017	1.7%	#N/A	#N/A	#N/A	1.1%	#N/A	#N/A	#N/A
2018	3.2%	#N/A	#N/A	#N/A	3.2%	#N/A	#N/A	#N/A
2019	2.6%	1.1%	1.8%	#N/A	3.2%	#N/A	4.6%	#N/A
2020	4.7%	#N/A	#N/A	#N/A	4.2%	#N/A	#N/A	#N/A

Footnotes:

1 The quality indicators take into account various factors that affect the quality of the data, notably the CV, the non-response errors and the imputation errors. Quality indicators indicate the following: A - Excellent; B - Very good; C - Good; D - Acceptable; E - Use with caution; F - Too unreliable to publish or sample size is too small to produce reliable estimates.

2 The introduction of administrative data in 2001 and the associated change in methodology resulted in level shifts for some series. This affects the comparability of pre- and post-2001 estimates.

3 Earnings data are based on gross payroll before source deductions.

4 Industry estimates in this table are based on the 2017 North American Industry Classification System (NAICS) Version 3.0.

5 Industrial aggregate covers all industrial sectors except those primarily involved in agriculture, fishing and trapping, private household services, religious organisations and the military personnel of the defence services.

6 Unclassified businesses (00) are businesses for which the industrial classification (North American Industry Classification System [NAICS] 2017 Version 3.0) has yet to be determined.

OEB Staff Notes:

#NA [OEB staff] NA (Not Available) reflects statistics not reported by Statistics Canada for at least one month in the year for the following reasons: 1) not available for a specific reference period; 2) suppressed to meet confidentiality requirements of the Statistics Act; or 3) too unreliable to be reported.

Logarithmic percentages calculated by OEB staff from StatsCan data based on the formula

Annual Percentage Change (AWE) = $\ln(AWE_t/AWE_{t-1})$

Statistics Canada. Table 14-10-0206-01 Average hourly earnings for employees paid by the hour, by industry, annual https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410020601

DOI: https://doi.org/10.25318/1410020601-eng

Average hourly earnings (including overtime) for salaried employees, by industry, annual [1 2 3 4]

	Canada				Ontario			
Reference period	Industrial aggregate excluding unclassified businesses [5 6]	Utilities	Electric power generation, transmission and distribution	Natural gas distribution	Industrial aggregate excluding unclassified businesses [5 6]	Utilities	Electric power generation, transmission and distribution	Natural gas distribution
	Current dollars							
2001	23.24	34.45	35.73	30.96	24.35	37.52	39.43	#N/A
2002	23.83	35.97	36.77	34.12	24.8	39.39	41.02	#N/A
2003	24.37	36.94	37.85	34.84	25.21	41.48	44.07	#N/A
2004	25.12	36.68	38.25	32.49	25.86	41.52	45.37	#N/A
2005	25.85	37.83	39.74	33.39	26.75	43.35	48.61	#N/A
2006	26.54	39.14	40.83	35.26	27.37	44.63	49.6	#N/A
2007	27.8	41.37	43.17	37.17	28.45	47.41	52.85	#N/A
2008	28.77	41.45	43.22	38.02	29.43	45.29	48.97	#N/A
2009	29.78	45.57	46.48	45.37	30.71	50.93	#N/A	#N/A
2010	31.04	#N/A	#N/A	43.57	31.95	#N/A	#N/A	#N/A
2011	31.67	47.04	#N/A	#N/A	32.35	49.76	#N/A	#N/A
2012	32.47	47.55	#N/A	42.11	33.07	49.9	#N/A	#N/A
2013	33.04	47.53	48.14	47.67	33.55	#N/A	#N/A	#N/A
2014	34.04	50.25	51.19	50.74	34.09	53.1	#N/A	#N/A
2015	34.61	50.27	50.65	53.85	34.71	#N/A	#N/A	#N/A
2016	35.18	50.36	#N/A	#N/A	35.47	#N/A	#N/A	#N/A
2017	35.96	#N/A	#N/A	#N/A	36.31	#N/A	#N/A	#N/A
2018	36.69	51.2	51.29	#N/A	37.22	51.7	51.91	#N/A
2019	37.6	55.06	55.73	#N/A	38.1	#N/A	59.86	#N/A
2020	39.01	#N/A	#N/A	#N/A	39.67	#N/A	#N/A	#N/A

Average hourly earnings (including overtime) for salaried employees, by industry, annual [1 2 3 4]

	Canada				Ontario			
Reference period	Industrial aggregate excluding unclassified businesses [5 6]	Utilities	Electric power generation, transmission and distribution	Natural gas distribution	Industrial aggregate excluding unclassified businesses [5 6]	Utilities	Electric power generation, transmission and distribution	Natural gas distribution
	Annual Percentage Change (logarithmic)							
2001								
2002	2.5%	4.3%	2.9%	9.7%	1.8%	4.9%	4.0%	#N/A
2003	2.2%	2.7%	2.9%	2.1%	1.6%	5.2%	7.2%	#N/A
2004	3.0%	-0.7%	1.1%	-7.0%	2.5%	0.1%	2.9%	#N/A
2005	2.9%	3.1%	3.8%	2.7%	3.4%	4.3%	6.9%	#N/A
2006	2.6%	3.4%	2.7%	5.4%	2.3%	2.9%	2.0%	#N/A
2007	4.6%	5.5%	5.6%	5.3%	3.9%	6.0%	6.3%	#N/A
2008	3.4%	0.2%	0.1%	2.3%	3.4%	-4.6%	-7.6%	#N/A
2009	3.5%	9.5%	7.3%	17.7%	4.3%	11.7%	#N/A	#N/A
2010	4.1%	#N/A	#N/A	-4.0%	4.0%	#N/A	#N/A	#N/A
2011	2.0%	#N/A	#N/A	#N/A	1.2%	#N/A	#N/A	#N/A
2012	2.5%	1.1%	#N/A	#N/A	2.2%	0.3%	#N/A	#N/A
2013	1.7%	0.0%	#N/A	12.4%	1.4%	#N/A	#N/A	#N/A
2014	3.0%	5.6%	6.1%	6.2%	1.6%	#N/A	#N/A	#N/A
2015	1.7%	0.0%	-1.1%	5.9%	1.8%	#N/A	#N/A	#N/A
2016	1.6%	0.2%	#N/A	#N/A	2.2%	#N/A	#N/A	#N/A
2017	2.2%	#N/A	#N/A	#N/A	2.3%	#N/A	#N/A	#N/A
2018	2.0%	#N/A	#N/A	#N/A	2.5%	#N/A	#N/A	#N/A
2019	2.4%	7.3%	8.3%	#N/A	2.3%	#N/A	14.2%	#N/A
2020	3.7%	#N/A	#N/A	#N/A	4.0%	#N/A	#N/A	#N/A

Footnotes:

1 The quality indicators take into account various factors that affect the quality of the data, notably the CV, the non-response errors and the imputation errors. Quality indicators indicate the following: A - Excellent; B - Very good; C - Good; D - Acceptable; E - Use with caution; F - Too unreliable to publish or sample size is too small to produce reliable estimates.
2 The introduction of administrative data in 2001 and the associated change in methodology resulted in level shifts for some series. This affects the comparability of pre- and post-2001 estimates.
3 Earnings data are based on gross payroll before source deductions.
4 Industry estimates in this table are based on the 2017 North American Industry Classification System (NAICS) Version 3.0.
5 Industrial aggregate covers all industrial sectors except those primarily involved in agriculture, fishing and trapping, private household services, religious organisations and the military personnel of the defence services.
6 Unclassified businesses (00) are businesses for which the industrial classification (North American Industry Classification System [NAICS] 2017 Version 3.0) has yet to be determined.

OEB Staff Notes:
#NA [OEB staff] NA (Not Available) reflects statistics not reported by Statistics Canada for at least one month in the year for the following reasons: 1) not available for a specific reference period; 2) suppressed to meet confidentiality requirements of the Statistics Act; or 3) too unreliable to be reported.
Logarithmic percentages calculated by OEB staff from StatsCan data based on the formula
Annual Percentage Change (AWE) = $\ln(AWE_t/AWE_{t-1})$

Statistics Canada. Table 14-10-0210-01 Average hourly earnings (including overtime) for salaried employees, by industry, annual
https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410021001
DOI: https://doi.org/10.25318/1410021001-eng

Appendix F: Fixed Weight Average Hourly Earnings

	Canada		Ontario	
Year	Industrial aggregate excluding unclassified businesses [6 7]	Utilities	Industrial aggregate excluding unclassified businesses [6 7]	Utilities
	Index, 2002=100			
2001	98.0	94.9	98.2	95.1
2002	100.1	99.9	100.1	99.9
2003	103.1	105.1	102.8	107.4
2004	105.9	107.0	105.4	109.3
2005	109.3	108.9	108.8	111.5
2006	112.1	111.2	111.3	113.6
2007	117.2	117.4	115.7	119.3
2008	121.3	118.9	119.3	117.6
2009	125.0	125.8	122.8	#N/A
2010	129.0	129.8	127.5	129.5
2011	131.7	131.8	129.6	121.9
2012	134.3	135.6	131.3	128.7
2013	136.5	135.0	133.2	131.7
2014	139.7	141.8	135.3	141.3
2015	143.2	138.1	139.0	136.2
2016	146.0	140.6	142.2	135.4
2017	149.1	148.8	144.9	140.8
2018	152.4	145.7	148.3	136.6
2019	156.3	150.5	152.5	145.7
2020	161.9	156.9	157.6	155.2
2021				

	Canada		Ontario	
Year	Industrial aggregate excluding unclassified businesses [6 7]	Utilities	Industrial aggregate excluding unclassified businesses [6 7]	Utilities
	Annual Percentage Change (logarithmic)			
2001				
2002	2.2%	5.1%	1.9%	4.9%
2003	2.9%	5.1%	2.7%	7.3%
2004	2.7%	1.8%	2.5%	1.8%
2005	3.1%	1.8%	3.1%	2.0%
2006	2.6%	2.1%	2.3%	1.9%
2007	4.4%	5.4%	3.8%	4.9%
2008	3.5%	1.3%	3.1%	-1.4%
2009	2.9%	5.6%	2.8%	#N/A
2010	3.2%	3.1%	3.8%	#N/A
2011	2.1%	1.6%	1.6%	-6.1%
2012	2.0%	2.8%	1.3%	5.5%
2013	1.6%	-0.4%	1.4%	2.3%
2014	2.3%	4.9%	1.6%	7.0%
2015	2.5%	-2.7%	2.7%	-3.7%
2016	2.0%	1.8%	2.3%	-0.6%
2017	2.1%	5.6%	1.9%	3.9%
2018	2.2%	-2.1%	2.3%	-3.0%
2019	2.5%	3.2%	2.8%	6.5%
2020	3.5%	4.2%	3.3%	6.3%
2021				

Footnotes:

1 The "other employees" category is excluded; for example, those whose basic remuneration is in the form of commissions or piece rates. In 2010, this category represented 7% of all employees.

2 The introduction of administrative data in 2001 and the associated change in methodology resulted in level shifts for some series. This affects the comparability of pre- and post-2001 estimates.

3 Estimates for the latest reference month are preliminary.

4 Industry estimates in this table are based on the 2017 North American Industry Classification System (NAICS) Version 3.0.

5 The quality indicators take into account various factors that affect the quality of the data, notably the CV, the non-response errors and the imputation errors. Quality indicators indicate the following: A - Excellent; B - Very good; C - Good; D - Acceptable; E - Use with caution; F - Too unreliable to publish or sample size is too small to produce reliable estimates.

6 Industrial aggregate covers all industrial sectors except those primarily involved in agriculture, fishing and trapping, private household services, religious organisations and the military personnel of the defence services.

7 Unclassified businesses (00) are businesses for which the industrial classification (North American Industry Classification System [NAICS] 2017 Version 3.0) has yet to be determined.

OEB Staff Notes:

Annual data calculated as average of published Statistics Canada monthly data.

#NA #NA (Not available") values reflect a year in which one or more months were not published due to confidentiality, small sample size or unreliability of the data.

Logarithmic percentages calculated by OEB staff from StatsCan data based on the formula

Annual Percentage Change (AWE) = $\ln(AWE_t/AWE_{t-1})$

Statistics Canada. Table 14-10-0213-01 Fixed weighted index of average hourly earnings for all employees, by industry, monthly
https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410021301

DOI: https://doi.org/10.25318/1410021301-eng

Appendix G: Consumer Price Index Statistics – Bank of Canada

	Annual Percentage Change			
Year	CPI - All Items	CPI-trim	CPI-median	CPI-common
1995	2.15%	2.03%	1.90%	1.35%
1996	1.58%	1.27%	1.30%	1.43%
1997	1.64%	1.16%	1.14%	1.55%
1998	1.00%	1.06%	1.19%	1.60%
1999	1.73%	1.31%	1.22%	1.61%
2000	2.73%	1.76%	1.56%	1.58%
2001	2.53%	2.23%	2.17%	1.98%
2002	2.24%	2.07%	2.09%	2.11%
2003	2.78%	1.93%	2.08%	1.94%
2004	1.84%	1.68%	1.68%	1.94%
2005	2.21%	1.74%	1.85%	1.93%
2006	2.00%	2.06%	1.98%	2.01%
2007	2.14%	2.58%	2.48%	2.18%
2008	2.38%	2.39%	2.56%	2.57%
2009	0.31%	1.80%	2.04%	2.43%
2010	1.78%	1.26%	1.61%	1.65%
2011	2.92%	1.76%	1.88%	1.81%
2012	1.52%	1.62%	1.77%	1.74%
2013	0.94%	1.18%	1.58%	1.55%
2014	1.91%	1.63%	1.72%	1.52%
2015	1.13%	1.61%	1.75%	1.63%
2016	1.44%	1.85%	2.06%	1.50%
2017	1.60%	1.44%	1.61%	1.35%
2018	2.27%	1.97%	1.88%	1.85%
2019	1.94%	2.01%	1.82%	1.81%
2020	0.73%	1.78%	1.96%	1.48%
2021				

Source: Consumer Price Index, 2000 to Present - Bank of Canada

Appendix H: Consumer Price Index Statistics, June 2021

	Canada			
Reference period	Measure of core inflation based on a factor model, CPI-common (year-over-year percent change) [2 3 4 5]	Measure of core inflation based on a weighted median approach, CPI-median (year-over-year percent change) [2 3 6 7]	Measure of core inflation based on a trimmed mean approach, CPI-trim (year-over-year percent change) [2 3 6 8]	CPI - all items
	Table 18-10-0256-01			Table 18-10-0004-01
	Percent			
Jan-20	1.8	1.9	2	2.4
Feb-20	1.7	1.9	1.9	2.2
Mar-20	1.6	1.8	1.7	0.9
Apr-20	1.5	2	1.7	(0.2)
May-20	1.4	1.9	1.5	(0.4)
Jun-20	1.4	1.9	1.7	0.7
Jul-20	1.3	1.9	1.7	0.1
Aug-20	1.4	2	1.7	0.1
Sep-20	1.4	2	1.8	0.5
Oct-20	1.5	2.1	1.9	0.7
Nov-20	1.5	2.1	1.9	1.0
Dec-20	1.3	2	1.8	0.7
Jan-21	1.3	2	1.9	1.0
Feb-21	1.3	2	1.9	1.1
Mar-21	1.5	2	2.1	2.2
Apr-21	1.7	2.2	2.3	3.4
May-21	1.8	2.3	2.6	3.6
Jun-21	1.7	2.4	2.6	3.1

Footnotes:

1 From April 2020 to June 2021, certain sub-indexes and components thereof were imputed using special approaches in either one, or more months. The affected indexes include child care services; housekeeping services; air transportation; personal care services; recreational services; travel tours; spectator entertainment; use of recreational facilities and services; beer served in licensed establishments; wine served in licensed establishments, and liquor served in licensed establishments. The details of these treatments from April 2020 to March 2021 are provided in technical supplements available through the Prices Analytical Series. Starting in April 2021, details and treatments are available upon request by contacting the Consumer Prices Division.

2 For more information on the measures of core inflation, please consult the methodology and general information documents found in our Definitions, data sources and methods - record number 2301.

3 The Bank of Canada's preferred measures of core inflation, CPI-common, CPI-median and CPI-trim, are subject to revision. In the case of CPI-median and CPI-trim, the revisions result from the fact that these measures are based on seasonally adjusted price index series. In the case of CPI-common, revisions are due to the statistical technique used, as the factor model is estimated over all available historical data. Table 18-10-0259-01 contains historical data for these three measures and is updated on a monthly basis.

4 This measure is based on Consumer Price Index (CPI) series adjusted to remove the effect of changes in indirect taxes.

5 CPI-common is a measure of core inflation that tracks common price changes across categories in the Consumer Price Index (CPI) basket.

6 This measure is based on Consumer Price Index (CPI) series that have been treated to remove the effect of changes in indirect taxes, and that have been seasonally adjusted.

7 CPI-median is a measure of core inflation corresponding to the price change located at the 50th percentile (in terms of the Consumer Price Index (CPI) basket weights) of the distribution of price changes in a given month.

8 CPI-trim is a measure of core inflation that excludes Consumer Price Index (CPI) components whose rates of change in a given month are located in the tails of the distribution of price changes.

Statistics Canada. Table 18-10-0256-01 Consumer Price Index (CPI) statistics, measures of core inflation and other related statistics - Bank of Canada definitions
https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1810025601
DOI: https://doi.org/10.25318/1810025601-eng

Statistics Canada. Table 18-10-0004-01 Consumer Price Index, monthly, not seasonally adjusted
https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1810000401
DOI: https://doi.org/10.25318/1810000401-eng