London Economics International LLC

Consultation on the Deferral Account – Impacts Arising from the COVID-19 Emergency

Prepared for:

The Ontario Energy Board webinar

www.londoneconomics.com

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Agenda

1	Introduction
2	COVID-19 Impact Study
3	Gains and losses in revenues
4	Cost of capital parameters
5	Jurisdictional review

This presentation summarizes four LEI reports prepared for the OEB and published in December 2020

- **LEI was engaged by the OEB to assist in its:**
  1. Consultation on the Deferral Account ("DA") – Impacts Arising from the COVID-19 Emergency (EB-2020-0133)
  2. 'Utility Remuneration' and 'Responding to Distributed Energy Resources' consultations (EB-2018-0287 and EB-2018-0288, respectively)
- **LEI prepared five separate reports as part of this process**
  - This presentation provides a summary of four of these reports relevant to the DA consultation, all published in December 2020 (based on information gathered largely between October and November 2020)

Reports produced by LEI

- Regulatory responses to COVID-19 in other jurisdictions
- OEB's cost of capital parameters and the impacts of COVID-19
- Gains and losses from differences in load and production
- COVID-19 Impact Study
- COVID-19 impact on distributed energy resources

Not covered in this presentation

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The COVID-19 Impact Study reviews a selection of impacts the pandemic has had on utility financial health and energy consumption

Scope of work

Demand impact	Assessment of the impact the COVID-19 pandemic has had on electricity and natural gas demand in Ontario, and the potential for longer-term demand pattern changes that may emerge from permanent behavioural and consumption changes due to the pandemic and associated economic crisis
Financial health	Evaluation of the observable financial impact the pandemic has had on utilities to date, including on revenues, costs, and overall financial integrity
Bad debt	Evaluation of the increasing instances of bad debt and indicative range of potential losses from non-payment by customers in the utility sector
Stimulus programs	Examination of the role of stimulus programs

Electricity demand declined following the onset of the pandemic, which is likely to continue impacting consumption patterns in the short term

- **The first wave of the pandemic and associated restrictions was marked by declines in electricity demand and consumption**
  - For example, **reductions of between 6% to 18%** of typical system demand were observed in April 2020
  - Consumption among customer classes also saw changes, with **residential consumption generally increasing**, and commercial and industrial consumption generally decreasing
- **Demand and consumption saw some recovery as restrictions loosened and temperatures increased in the spring and summer months**
  - Warmer-than-expected weather amplified already increasing residential consumption, while commercial and industrial loads witnessed some recovery
  - Other factors, such the Industrial Conservation Initiative peak hiatus, also played a role
  - As a result of these factors, **summer peak demand reached high not seen since 2013**
- **For natural gas, the direct impact on usage during the first wave of the pandemic was less pronounced**
- **The pandemic and associated restrictions on activity are likely to continue impacting demand and consumption**
  - Unlikely to result in sharp changes to demand as observed following the first wave of the pandemic around April 2020

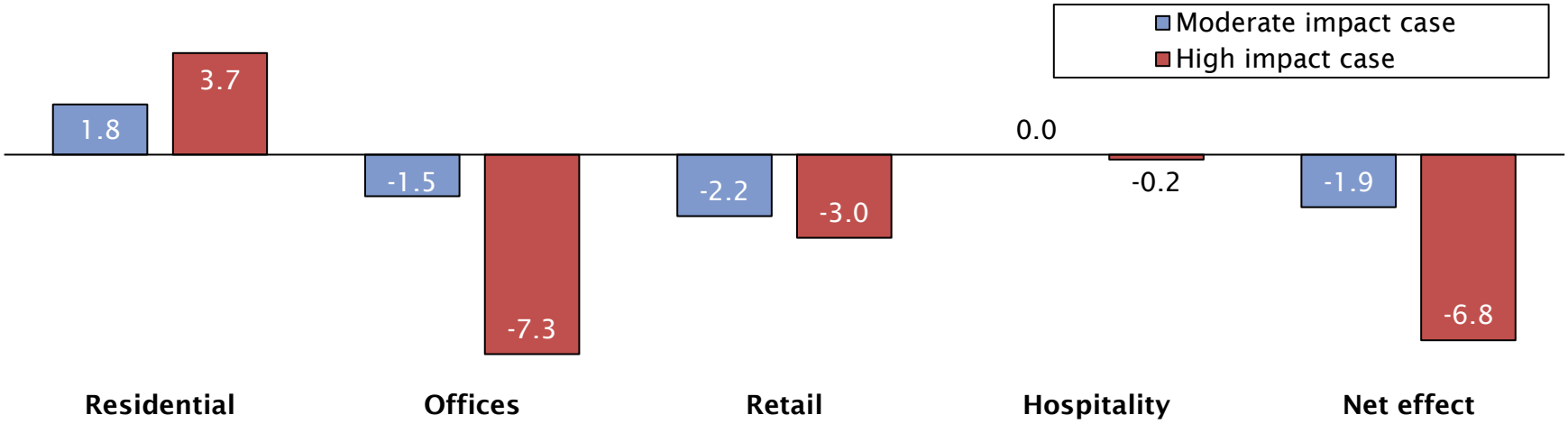
Impacts to residential and commercial customer consumption may also persist in the longer term

- **In the longer term, certain demand pattern changes may emerge from permanent behavioural and consumption changes prompted or accelerated by the pandemic**
  - These changes are more likely to emerge among residential and certain commercial customers
- **To assess the impact of these changes, LEI developed an illustrative long-term impact model for Ontario that demonstrates the potential impact to consumption from changes to customer behaviour**
  - The assessment explores changes in certain areas of residential and commercial load, namely:
    - Increasing numbers of office workers opting to work from home;
    - Declines in office space consumption; and
    - Declines in retail and hospitality sector consumption.

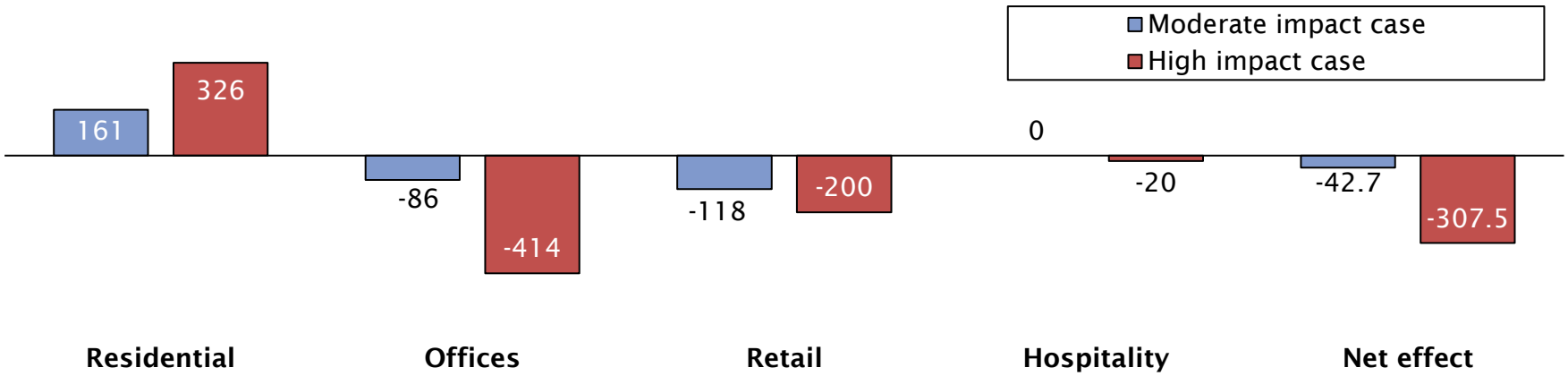
  - Two cases were explored (a moderate and high impact case) based on permanent transitions to working from home and impacts to energy consumption in offices, retail, and hospitality
  - Assessment is meant as a “but-for” exploration of how specific pattern changes could impact electricity and natural gas usage, rather than a full demand forecast

Illustrative results from the scenarios indicate a comparatively larger impact on electricity versus natural gas in the longer term

Summary of long-term impact for electricity (terawatt hours)



Summary of long-term impact for natural gas (million cubic meters)

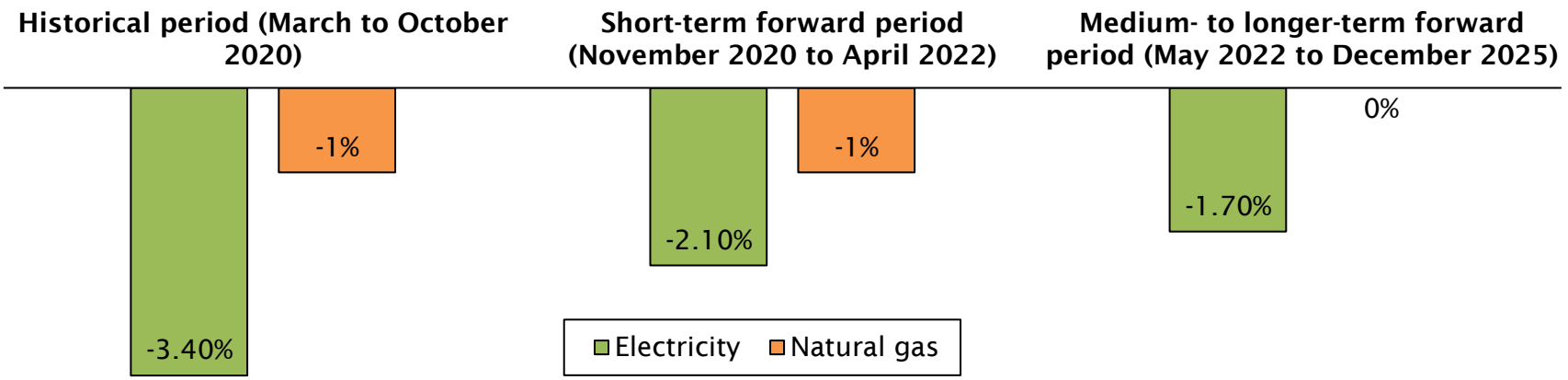


Note: for reference, 2019 consumption for electricity was around 135 TWh in Ontario, while 2019 deliveries for natural gas were around 27 billion cubic meters

Results from survey of electricity and gas distributors indicate declines in actual and expected volumes as a result of the pandemic

- **Distributors were asked about the estimated impact that the COVID-19 pandemic has had or is expected to have on volumes delivered, relative to weather-normalized expectations or alternative internal baselines that existed prior to the pandemic**
  - Voluntary LEI survey to Ontario electricity and natural gas distributors received responses from 13 distributors
  - Questions were posed at the aggerate level (shown below) as well as customer class level
    - Responses at the class level indicate generally an expectation for increasing residential volumes delivered, and decreasing commercial and industrial volumes delivered (compared to expectations prior to the pandemic)

Summary of survey results for total volumes delivered across different timelines*



* Simple average based on distributor responses. Number of respondents varies across the different timelines shown

COVID-19's impact on utility sector revenues as a whole was controlled, but electricity distribution utilities were impacted more comparatively

- **The utility sector as a whole did not exhibit large-scale revenue disruption as a direct result of the pandemic in the second and third quarter of 2020**
  - This includes the impact on electricity transmission, regulated electricity generation, and natural gas distribution
- **Electricity distribution revenues were comparatively harder hit**
  - Electricity distribution revenue impacts tied to impacts to utility's ultimate customers
  - For example, declines in electricity consumption among commercial customer classes led to declines in commercial revenues, while increases in residential consumption did not provide revenue offset for most distribution utilities that have fixed residential distribution billing determinants
    - Magnitude of each utility's lost revenues due to changes in consumption/demand will depend on a number of factors, including its size, customer class breakdown, and the utility's class-specific load changes

Main avenues for distribution revenue impacts

- **Lost revenue due to lost load**
- **Postponing previously approved rate increases (which has started to be recovered since November 1, 2020)**
- **Actions taken to provide customers with relief (including for example waiving or reducing late payment charges)**

The COVID-19 pandemic also directly impacted utility costs and expenses

- **While cost pressures are ongoing, they were generally highest during the second quarter of 2020 given the unprecedented nature of the pandemic and the large degrees of uncertainty that emerged in the immediate aftermath of the first wave**
- **The direction and magnitude of costs and expenses arising from COVID-19 also varied by utility and its position in the value chain**
  - Utilities generally would have seen higher expenses related to enhanced safety measures and the implementation of alternate working and operating conditions
  - Deferral of capital and maintenance projects provided temporary cost relief for some
  - Increasing bad debt expenses and/or amounts in arrears are one area that have impacted distribution utilities

Examples of cost increases

- Higher operating, maintenance, and administration due to labour-related expenses
- Direct COVID-19 related expenses, including cleaning supplies, protective equipment, and other safety measures

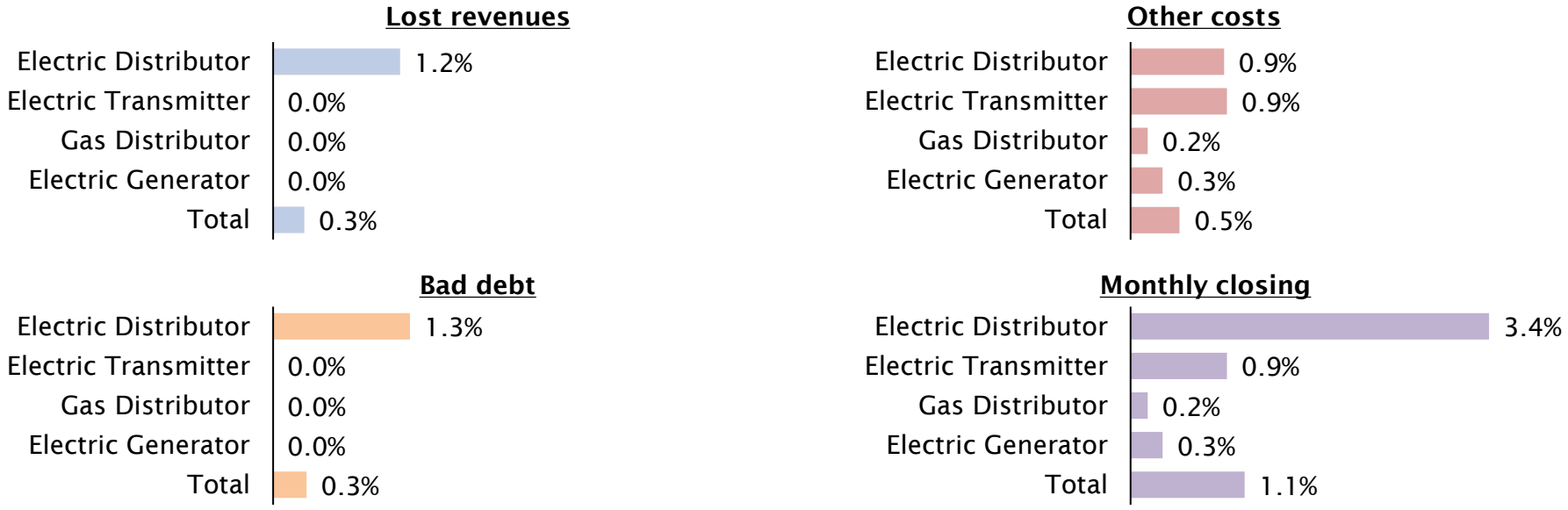
Examples of cost decreases

- Lower operating costs as a result of work reprioritization and temporary deferrals of operating costs
- Temporary deferrals of capital projects as a direct result of the pandemic and its consequences

OEB DA sub-accounts provide a picture of potential incremental expense impacts that COVID-19 has had across individual utilities

- **The sub-accounts track "any incremental costs and lost revenues related to the COVID-19 pandemic"**
  - Sub-account values are not definitive, and items included in the accounts may vary by utility
  - Total of around $171.1 million has been reported by utilities across the sub-accounts, broken down into lost revenues (around $46.9 million), other costs (around $73.3 million), bad debt (around $50.5 million), and billing & system changes ($0.4 million)

Illustrative ratio of sub-account amounts compared to 2019 revenues* by type

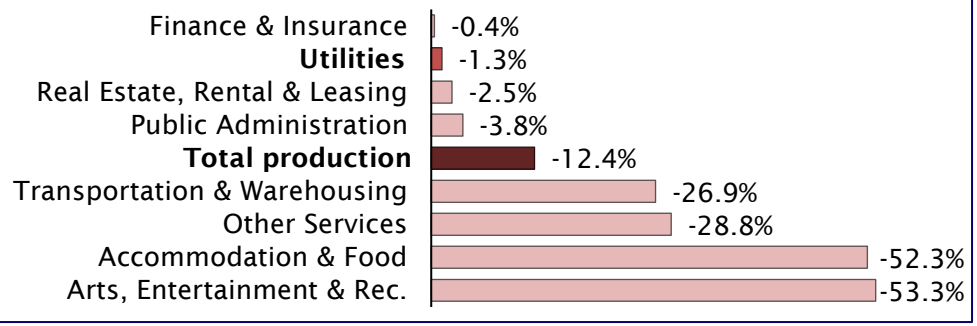


* Based on information from the OEB's COVID-19 Account Balances Reported by Electric and Natural Gas Utilities as of October 31, 2020, the OEB's 2019 yearbooks of electricity and natural gas distributors, and OPG and Hydro One's 2019 Annual Reports

Public information indicates generally controlled observable financial impact on the sector from the pandemic, but some utilities have been harder hit

- **In spite of revenue and cost pressures, the utilities sector as a whole has been comparatively insulated from the pandemic's impact, through continued operations as essential businesses during the heights of the economic downturn**

Real GDP change for selection of industries* (Q2 2020)



- **Based on publicly available information, observable financial impact of COVID-19 to date has been controlled, suggesting the sector as a whole has maintained its financial integrity thus far through the pandemic**
  - The impact of the COVID-19 pandemic on financial health is more observable among larger utilities, for which routine quarterly updates are available in the public domain
    - LEI has not seen reports of Ontario utilities subject to financial distress or receiving negative attention from ratings agencies
  - Utilities have been impacted differently depending on their position in the value chain, customer class makeup, and size/diversity of service territory
    - In many areas, electricity distributors with larger proportions of commercial and industrial customers seem to have borne the brunt of the negative impacts of COVID-19 so far

* Industries shown are top and bottom four industries by real GDP change, based on data from the Ontario Ministry of Finance.

Increasing instances of bad debt are one area of concern for distribution utilities

- **One specific area of concern going forward relates to liquidity risk that may emerge for utilities (particularly on the distribution side), in the event that negative cost and revenue pressures persist**

  - Focus here is on the potential for bad debt and/or arrearage levels to potentially increase as a result of customers' inability to pay their utility bills

- **Given the unprecedented nature of the pandemic, the extent of its impact on bad debt going forward will depend on its duration, the nature of any associated restrictions, and the economic conditions going forward**

  - This results in a high degree of uncertainty around the impact the pandemic could have on customers' ability to pay and any resulting increases in bad debt going forward

  - Bad debt has historically been more associated with residential customers in general, although the pandemic has so far led to disproportionate increases in instances of late payments, arrearages, and potential bad debt levels among general service customers
    - All rate classes have been affected, but, proportionally, smaller and medium sized general service customers seem to have been affected most
    - Further increases in residential bad debt/arrearages would exacerbate this issue

The pandemic and its wide-reaching impacts have resulted in high degrees of uncertainty with respect to future outlooks

Demand impact

- Electricity demand was particularly hard-hit as a result of lockdown restrictions
- Class-specific consumption also changed, including increases in residential load, and decreases in commercial and industrial loads
- Some of these changes (particularly relating to certain aspects of residential and commercial load) may exhibit some permanence

Financial health

- Distribution utilities in particular have seen negative cost and revenue impacts as a result of the pandemic, notably among distributors with higher proportions of commercial and industrial customers
- However, information reviewed suggests this has not translated into acute financial issues for utilities, and that the sector as a whole has maintained its financial integrity thus far

Bad debt

- Concerns around customer bad debt levels and/or arrearages may persist over the duration of the pandemic, and high bad debt levels could cause liquidity risk concerns among certain distribution utilities

Stimulus programs

- Substantial stimulus programs have been implemented in response to the economic impact of the pandemic, and likely played an important role in reducing the negative impact of the pandemic on consumption
- Stimulus programs may also directly influence the short- and long-term load trajectories and financial impacts of the pandemic on utilities

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Gains and losses report provides approach to estimate value of gains/losses in revenues due to load/production changes attributable to the pandemic

- **As discussed in the COVID-19 Impact Study, one of the main impacts of the pandemic on the utility sector relates to unexpected changes in consumption, demand, and volumes (referred to as load for simplicity)**
  - These changes vary between utilities and customer types (e.g. residential customers may have seen increases in consumption, while commercial and industrial customers may have seen declines)
  - Impacts also vary between utility types (e.g. gas distribution, electricity transmission, electricity distribution)
- **LEI's gains and losses report provides an approach for estimating the value of gains or losses in revenues due to gains or losses in load that can be attributed to the COVID-19 pandemic for regulated utilities**
  - The intention of this approach is to isolate reasonably identifiable gains or losses in load or production, relying where possible on methods and practices that utilities are already familiar with in the regulatory context, and in a manner which is intelligible to stakeholders
  - Such calculations are by their nature imprecise, and may or may not capture all the effects of COVID-19, or exclude all non-COVID related impacts

Proposed approach for regulated utilities on the delivery side seeks to isolate residual load values and arrive at estimated revenue impact (if any)

1 Gather forecast, actual, and historical load data

- Start with **weather-normalized load forecast** approved by OEB in most recent rebasing or Custom IR application, adjusted by a growth factor to arrive at an **adjusted load forecast** for 2020 (**by rate class and rate zone level where relevant,** which should be the case for all load-related steps)
- Gather 10-year historical load data (2010-2019), calculate standard deviation based on this data. Add and subtract this standard deviation from adjusted load forecast for 2020 to arrive at upper and lower bounds of reasonableness

2 Compare adjusted forecast load against actual load*

- **Compare** adjusted 2020 load forecast and the bounds of reasonableness **against actual load** for 2020, to establish if actual load has deviated in some material fashion from forecast (regardless of cause)

3 Perform weather normalization of actual load and estimate residual load

- **Weather-normalize 2020 actual load** to arrive at an estimate for 2020 actual load under normal weather conditions. Compare against bounds to **isolate residual load deviation** (if any)

4 Assess revenue impact

- Using residual load deviation and rates that were current at the time the residual loss or gain in load occurred, **estimate the revenue impact** value (at granular levels where relevant). Sum revenue impacts across all rate classes and rate zones to arrive at aggerate revenue impact amount
- **Identify potential savings and/or costs** (if any) that emerged as a result of the residual gains or losses in load, that are not being recorded in any other DA sub-accounts. Net these savings/costs out from aggregate revenue impact amounts to **arrive at residual revenue impact**

*While Step 2 was included to provide clarity and understanding of the proposed approach, utilities in their implementation of the approach would likely skip from Step 1 to Step 3 (as Step 3 is the basis for determining the load deviation impact used to estimate the revenue impact).

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The cost of capital report provides an assessment of the impact the COVID-19 pandemic has had on the OEB's cost of capital parameters

- **To assess the impact of the COVID-19 pandemic on Ontario's cost of capital parameters, LEI reviewed available information on the costs of debt and equity in the aftermath of the pandemic**
- **This review suggests that the cost of debt has fallen, while the cost of equity in the market has risen**
  - Decline in the long-term cost of debt is evidenced by declines in the Long Canada Bond Forecast and actual 10-year bond yields following actions taken by the Bank of Canada in response to the pandemic and its consequences
  - Decline in the short-term cost of debt is evidenced by the lower Banker's Acceptance Rate, driven by a low interest rate environment that has been implemented in response to the COVID-19 pandemic
  - Increase in cost of equity is evidenced by increase in the Market Risk Premium and the market beta (a measure of relative volatility)

Debt cost ⇩

⇧ Equity cost

- **Overall, LEI's view is that Ontario utilities are fairly compensated for risk based on current parameters**
  - LEI's view is that a more comprehensive review of the cost of capital parameters (from the 2009 methodology) may be warranted, but that it is not appropriate to perform this review in the midst of an extremely uncertain outlook for the Ontario economy

Assessing the three standards of the Fair Return Standards ("FRS") suggests that each component and the FRS itself have been met

	1. Comparable investments standard	2. Financial integrity standard	3. Capital attraction standard
Overview of standard	Fair or reasonable return on capital that should be **comparable to the return available** from the application of invested capital to other enterprises of like risk	Return should enable the **financial integrity** of the regulated enterprise to be **maintained**	Earned return should permit **incremental capital to be attracted** to the enterprise on reasonable terms and conditions
Approach to assessment	Comparing **historical allowed return on equity** for Ontario utilities to the S&P 500 index returns	Qualitative review of the utility landscape in Ontario, and **ratings agency outlooks** for Canadian investor-owned utilities where available	Comparison of the **stock performance for** Hydro One, Fortis Inc., and Emera Inc., relative to overall market indices (TSX and NYSE)
Findings based on assessment	▪ In the period from **2010-2019**, average allowed ROE for Ontario utilities has averaged **95.8%** of the return to the S&P 500; during the **2020** period up to October, it has averaged **120.3%** ▪ Change in ratio suggests **comparable investment standard has been more than adequately met,** as allowed returns on equity relative to benchmark equity returns have improved	▪ **Ratings** notes from both Canadian and global ratings agencies **have generally been stable** ▪ **No evidence** of Ontario utility **defaults** since the beginning of the pandemic, and LEI has not seen reports of utilities subject to negative attention from ratings agencies, suggesting they have **maintained their financial integrity** through the COVID-19 pandemic	▪ Data suggests that in general, Canadian utilities have been successful at **maintaining investor confidence** in their shares through the pandemic ▪ This suggests that the **capital attraction standard continues to be met**

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LEI's jurisdictional report provides background on regulatory responses to COVID-19 in other North American jurisdictions

Scope of work

Review of regulatory responses in North America to understand what other regulators have done to date, or announced that they are considering

Identification of the regulatory principles and policies being used, or expected to be used, by other regulators in their handling and review of COVID-19

Identification of the accounting treatments expected to be used in other jurisdictions to address the recognition of COVID-related regulatory assets or deferrals on utility financial statements

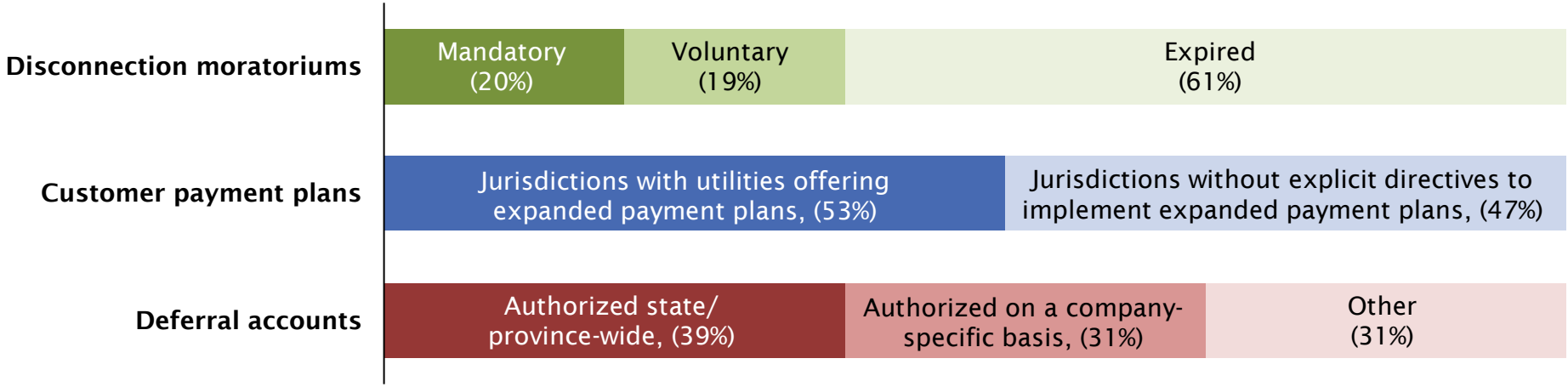
Note what other jurisdictions are considering and implementing regarding the treatment of lost revenues attributable to the COVID-19 pandemic

Note: LEI began the research process for this report in September 2020, with updates made for selected jurisdictions through to November 2020

Regulatory responses to COVID-19 can generally be grouped into three categories

1. **Utility service disconnection moratoriums**
   - All jurisdictions had disconnection moratoriums in 2020 following the onset of the pandemic (either on a voluntary or mandatory basis), although most have since expired
   - Some jurisdictions currently have winter shut-off moratoriums in place
2. **Expanded customer payment arrangements**
   - 31 out of 59 (53%) states/provinces have reported offering flexible payment plans (e.g., payment plans up to 24 months, waiving late fees, fixed installments)
3. **Authorization of cost deferrals**
   - 41 out of 59 (69%) allow deferral of COVID-related costs, of which 23 (39%) have authorized deferral in generic accounts that apply to all utilities *(see map on next slide)*

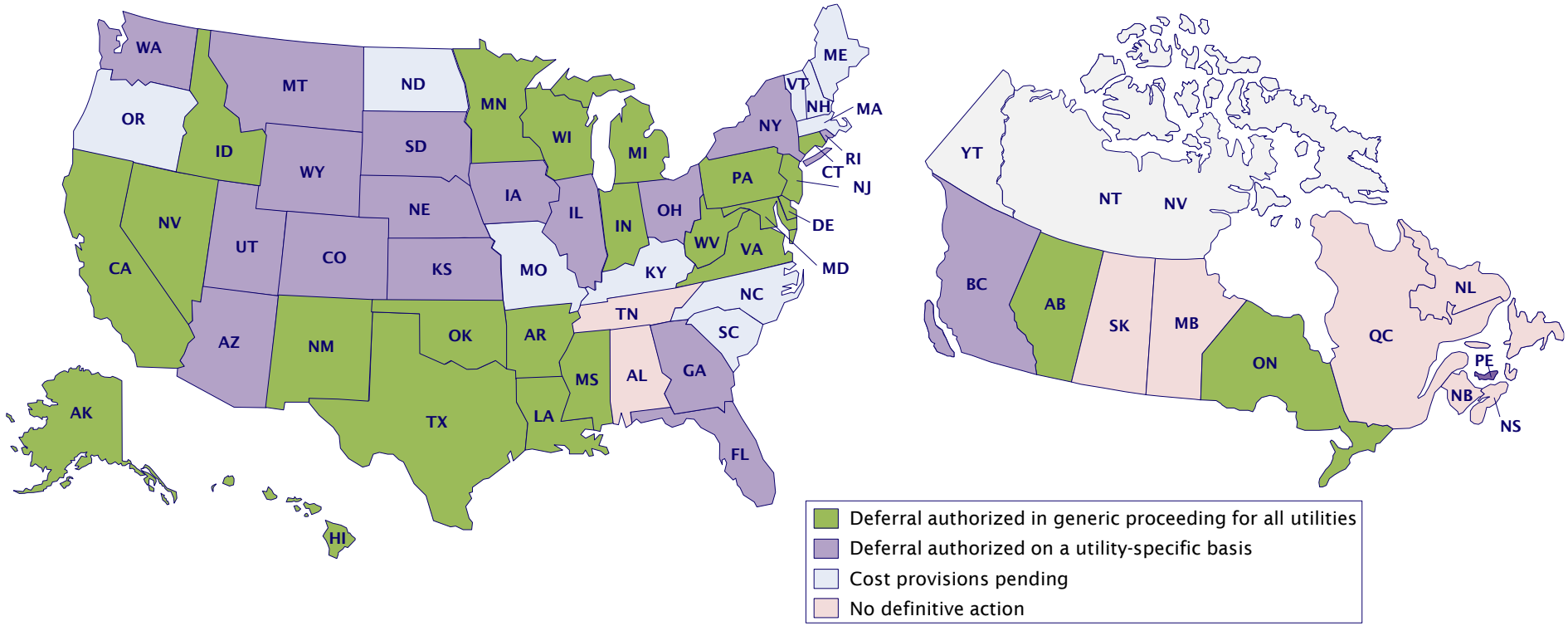
Summary of regulatory responses to COVID-19 across North America (as of October 2020)



LEI analyzed deferral account orders in 23 North American jurisdictions with generic accounts

- **Of the 23 jurisdictions (green states/provinces below excluding Ontario), 17 (74%) have established regulatory assets for possible future recovery, while 6 (26%) have allowed deferral for tracking and accounting purposes only**
  - LEI analyzed deferral account orders for these 23 jurisdictions to find commonalities among: regulatory principles relied upon; types of expenses/revenues allowed for deferral; and approaches to accounting treatments

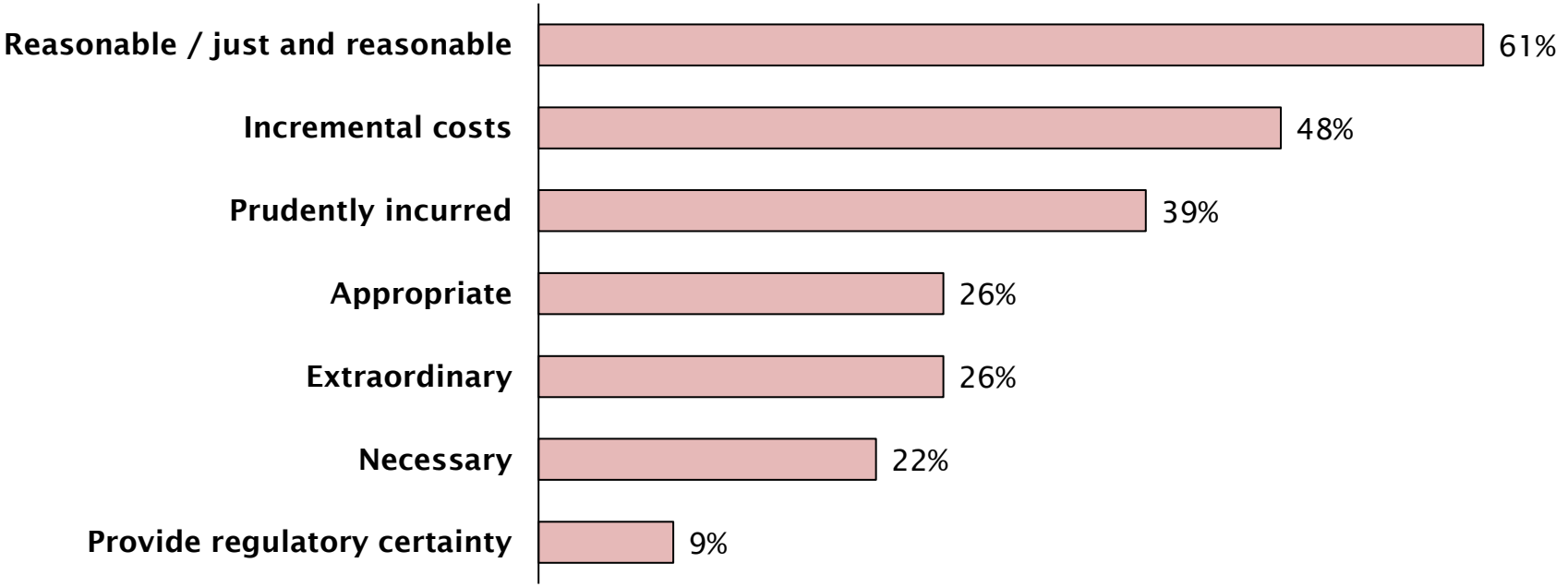
COVID-19 cost recovery provisions by state/province (as of October 2020)



Deferral account orders cited regulatory principles to be relied upon primarily in relation to the costs eligible for recovery in future proceedings

- **Regulators most often mentioned qualifiers such as *just and reasonable*, the *incremental nature of costs* being considered, and the *prudency* of costs incurred**
  - Regulators will ultimately be guided by their mandate to consider and adequately balance the interests of utilities and their customers
  - These principles and qualifiers indicate what regulators from these jurisdictions intend to rely on when weighing these interests

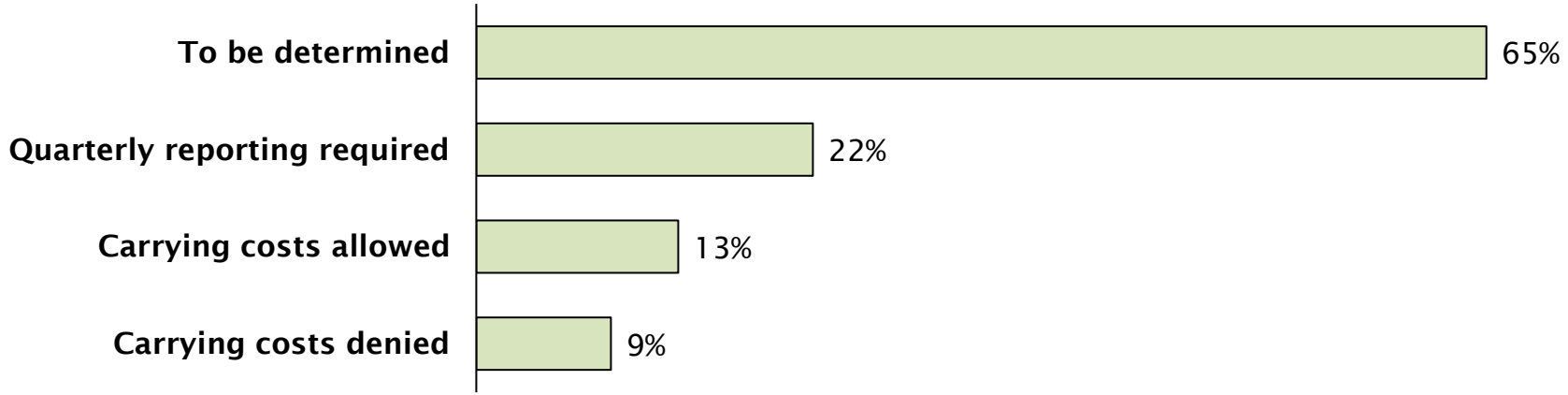
Most frequently mentioned principles and qualifiers among the 23 jurisdictions



Most regulators postponed identification of specific accounting treatments to future proceedings due to the unprecedented nature of the pandemic

- **The issue of financial statement recognition was not explicitly addressed in the deferral orders**
- **5 of the 23 (22%) regulators require utilities to submit quarterly reports**
  - Reports detail amount of costs incurred and savings realized/booked in deferral accounts
- **5 of the 23 (22%) jurisdictions have reached decisions on carrying costs**
  - 2 denied utilities the ability to apply a carrying charge to deferrals, 3 have allowed
- **California has authorized securitization of COVID-19 costs**
  - Allows utilities to securitize revenue shortfalls from declining sales and unpaid bills arising from the pandemic

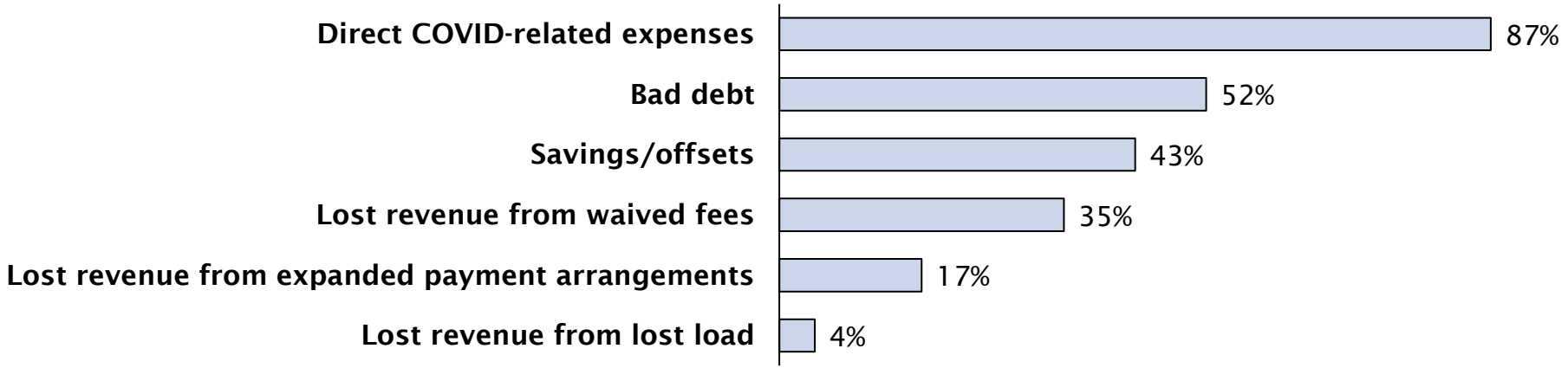
Accounting treatments identified or specified among the 23 jurisdictions



While most jurisdictions have allowed deferral of direct COVID-related costs, indirect costs have been more contentious

- **Deferral account directives across jurisdictions generally lack specificity, but regulators in the 23 jurisdictions have explicitly allowed the deferral of certain types of expenses. These include:**
  - Direct COVID-related expenses (e.g., PPE, health and safety costs, technology costs for remote work, critical employee sequestration costs, employee screening and testing)
  - Bad debt (which can have certain qualifiers around exceeding historical levels or amounts used to set current rates)
  - Savings that may offset deferred costs (e.g., from federal/state assistance)
  - Lost revenue
    - With respect to lost revenue due to lost load, 3 out of 23 (13%) jurisdictions reviewed outright denied deferral of lost revenues from lost load, or postponed determination to a future proceeding

Expenses/revenues explicitly allowed among the 23 jurisdictions



Ontario's regulatory response to the pandemic aligns with approaches adopted in other jurisdictions

Regulatory responses

Regulatory responses following the onset of the pandemic include:

- disconnection moratoriums
- expanding customer payment arrangements
- considering deferral accounts for COVID-related costs

Regulatory principles

Regulatory principles mentioned in the 23 jurisdictions reviewed include:

- just and reasonableness
- the incremental nature of costs being considered
- prudency of costs incurred
- balance between utility and customer interests is critical

Accounting treatments

- Most regulators reviewed have yet to identify specific accounting treatments or address financial statement recognition, given the unprecedented and ongoing issues around the pandemic
- A limited number have either approved or denied carrying charges to deferrals

Lost revenues

Direct COVID-related costs have been explicitly allowed for deferral in most jurisdictions reviewed, but:

- lost revenue allowance has so far been less common
- lost revenue specifically related to lost load has so far been the least common