

**Réponses du Transporteur  
à la demande de renseignements numéro 1  
d'Option consommateurs  
(« OC »)**

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DEMANDE DE RENSEIGNEMENTS N° 1 D'OPTION CONSOMMATEURS (OC) À  
HQT/NERA<sup>1</sup>

DEMANDE DU TRANSPORTEUR DE MODIFICATION DES TARIFS ET  
CONDITIONS DES SERVICES DE TRANSPORT POUR LES ANNÉES 2021 ET  
2022

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R-4167-2021 VOLET 2

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NERA REPORT

1. **Reference :**                    i)    **B-0159 Report: Experience of NERA & Dr. Makholm**

**Preamble:** NERA has been retained by HQT to prepare a review of capital variation accounts (in the context of inclusion of a capital CER for a 2<sup>nd</sup> Generation MRI).

**Questions:**

- a) Please provide a listing, with references, of recent NERA studies on each of:  
i) CER for capital in MRI.  
ii) Capital variation deferral accounts or capital in-service variation accounts.

**Réponse :**

- 1                    **For the listing of references regarding NERA studies, OC is invited to consult**  
2                    **the CV of Dr. Jeff D. Makholm filed in Appendix A to the expert report.<sup>2</sup>**

- b) Please include client, regulatory agency and date for each.

**Réponse :**

- 3                    **Please see the answer to question 1 a).**

- c) Specifically note and reference studies reviewed by Canadian energy regulators.

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<sup>1</sup> National Economic Research Associates Inc. (NERA), Boston, Massachusetts.

<sup>2</sup> [B-0159 Étude de l'opportunité de la mise en place d'un CÉR Dépenses en capital réalisée par NERA](#)

**Réponse :**

1 **Please see the answer to question 1 a).**

d) Please provide the scope of the Canadian studies, conclusions and recommendations.

**Réponse :**

2 **Please see the answer to question 1 a).**

e) Please provide reference(s) to the regulator's decision(s).

**Réponse :**

3 **Please see the answer to question 1 a).**

f) Please identify/list in the above, the regulatory reports authored in whole or part by Dr. Makolm, in the last 5 years.

**Réponse :**

4 **Please see the answer to question 1 a).**

2. **References:**
- i) **B-0159 NERA Report, page 4, b. Assignment**
  - ii) **B-0159 NERA Report, pages 5-6, II. Conclusions**
  - iii) **B-0159 Nera Report, page 23, Table 2**

**Preamble** : NERA states on p.7 that “DVA accounting is not a useful substitute for factual examinations of the reasonableness of the project-by-project forecasts that make up the forward test year for capital additions, for three reasons.

First, DVA accounting would remove the Régie’s useful regulatory lag incentive mechanism.

Second, it would reflect a *misuse* of such deferred accounting mechanisms (as generally accepted accounting for regulated enterprises throughout North America—which are designed to deal with costs outside utilities’ control).

Third, it would not streamline the Régie’s regulatory burden—but rather introduce contentious elements of ex post scrutiny, into capital additions—given that “prudence” principle underlying Canadian regulation would still apply to such additions.” (our emphasis)

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**Questions:**

- a) Confirm that most Canadian regulators use a forward test year for all costs of service. Provide examples of any that do not.

**Réponse :**

1 **Dr. Makholm is generally aware that Canadian regulators often use forward test**  
2 **years but this does not allow him to confirm “most”.**

- b) What are the regulatory principles that apply to deferral accounts for both O&MA and capital costs? Please discuss in detail with references.

**Réponse :**

3 **Dr. Makholm’s opinions of the uses for such accounts confirm to the opinions**  
4 **he presented in his evidence, as he further explained in his answers to the**  
5 **individual parts of Régie 1.7.**

- c) Confirm whether under incentive regulation, deferral accounts are still used by some regulators. If confirmed, please provide examples to support your answer.

**Réponse :**

6 **Dr. Makholm has not done a specific search of the use of deferral accounts**  
7 **under incentive regulation. However, for some types of costs (either large,**  
8 **unexpected or difficult to foresee) deferral accounting could be employed by**  
9 **some regulators for utilities subject otherwise to some form of incentive**  
10 **regulation.**

- d) Confirm whether one possible/likely use of capital deferral accounts relates to capital contributions from third parties. If confirmed, please provide examples to support your answer.

**Réponse :**

11 **Dr. Makholm finds that the information required by the intervener relates to a**  
12 **level of detail that goes beyond the scope of his evidence.**

- e) Confirm that regulators generally apply prudence reviews to capital additions. If confirmed, provide examples, including from Québec, to support your answer.

Réponse :

1           **The regulatory principle of “prudence,” as Dr. Makholm described, is part of**  
2           **North American regulatory generally. As such, it would apply to capital**  
3           **additions, whether specifically described in cases or not. For HQT, the Régie**  
4           **considers assets prudently acquired and useful.**

f) Please define and provide relevant references for “regulatory lag”. Provide specific examples, including from the Régie.

Réponse :

5           **Dr. Makholm provided a citation from Alfred Kahn’s 1971 book on regulatory lag,**  
6           **which he considers appropriately descriptive for the term. The Régie’s use of a**  
7           **forecast test year for capital additions, since D-99-120, is an example of the use**  
8           **of regulatory lag.**

g) With regard to Table 2, please provide an addition for all Canadian regulators NERA is aware of. Please add any notes/comments.

Réponse :

9           **NERA has not identified similar Canadian references.**

h) Is NERA aware of any transmission or distribution companies (gas and electricity) regulated by the Régie, that have deferral accounts other than HQT? If so, please list these and the relevant deferral accounts.

Réponse :

10           **Dr. Makholm has not identified deferral accounts for other transmission or**  
11           **distribution companies regulated by the Régie.**

3. **Reference:**           i)       **B-00159, pages 18-19, A. Prudence**

**Preamble** : NERA states on p. 19 that: “The force of such reasoning (Brandeis)—the search for practical regulation without endless conflict—led to the prudence standard becoming “regulatory common law” in Canada and the United States.<sup>23</sup> Regulators apply innumerable minor instances of “imprudence” as regulatory commission staffs assess normal rate cases. But major imprudence disallowances that threaten the credit of utilities are uncommon—and almost all related to power plant construction.”

**Questions:**

- a) Please provide a list of material prudence disallowances for *electricity transmission* that NERA is aware of. Provide date and regulatory entity:
- i) in the USA.
  - ii) In Canada.

**Réponse :**

1 **Dr. Makholm provided a reference to such a list in a publication listed in his CV:**  
2 **“Prudence: Under Strain in California,” Natural Gas and Electricity, Vol. 36, No. 5**  
3 **(December 2019), pp. 29-32. Dr. Makholm does not have such a list for Canada.**  
4 **See appendix 1: “Prudence : Under Strain in California”.**

- b) Please define and discuss, in terms of gross and net plant additions to rate base, from a regulatory accounting perspective, the difference between capital additions and in-service additions to rate base. Specifically discuss timing differences.

**Réponse :**

5 **Dr. Makholm is not an accountant, as such, and does not offer a discussion of**  
6 **those differences as part of his evidence to the extent that they deal with specific**  
7 **accounting definitions relevant to the Régie.**

- c) In NERA’s experience, which approach(es) are used by North American regulators? Give examples.

**Réponse :**

8 **Please see part b). Furthermore, Dr. Makholm restates the conclusion of his**  
9 **evidence and adds the fact that it is a first of its kind for HQT.**

- d) Please comment the following assertions:

- i. ratepayers should only pay for assets that are “used and useful” and
- ii. whether delays in commissioning can result in assets not meeting this regulatory principle.

**Réponse :**

1 (i) “Used and useful” is a category generally applicable to regulated assets  
2 under North American regulatory principles. For HQT, the Régie considers  
3 assets prudently acquired and useful.

4 (ii) Dr. Makholm has discussed delays in commissioning in answers to IRs from  
5 the Régie (see 1.2.1 and 1.3). He described that material delays would well  
6 warrant and examination—but he does not consider the “used and useful”  
7 principle to apply as a general matter for project destined, but for such a delay,  
8 to be “used and useful”.

**4. References: i) B-0159, Appendix B**

**Preamble** : Appendix B “Impact of Forecast and Actual Spending on the Revenue Requirement” shows *hypothetical* capital spending and rate base for two years.

**Questions:**

a) With respect to the examples provided in Appendix B, please confirm these are hypothetical examples and not based on actual HQT data.

**Réponse :**

9 **Confirmed.**

b) Does NERA support average ratebase additions or weighted averages? Which does HQT use?

**Réponse :**

10 **Dr. Makholm does know how “weighted averages” apply to Appendix B, and he**  
11 **cannot answer one way or another.**

c) Please provide an example using actual HQT capital additions for one or more recent sample years where the deviation of capital spending from actual was material. Please provide answers in tabular and Excel formats.

Réponse :

- 1 Dr. Makholm used Appendix B to confirm his understanding about how the  
2 forward test year accounting works. It is not a kind of analysis that conforms to  
3 actual cases—only the hypothetical example he gave. Please see his answer to  
4 Régie 1.6.1.

### Hydro Quebec Transmission Historic Capital Spending

5. References:
- i) B-0159, Page 4
  - ii) R-3778-2011, B-0004 HQT-1, Document Table 4  
R-3935-2015, B-0004 HQT-1 Document 1 Table 4  
R-4097-2019, B-0004 HQT-1, Document 1 Table 4  
R-4168-2021, B-0004 HQT-1, Document 1 Table 3

**Preamble:** NERA states that: “Observing the differences between forecast and actual capital addition values in recent years, the Régie has posed the question of whether it would be better to use “deferral and variance account” (DVA) accounting for capital additions within the context of a forecast test year. Both the Canadian Federation of Independent Business (Fédération Canadienne des Entreprises Indépendantes “FCEI”) and the Association Québécoise des Consommateurs Industriels d’Électricité/Conseil de l’Industrie Forestière du Québec (“AQCIE-CIFQ”) generally support the concept of a DVA for capital additions.”

*OC wishes to understand the underlying data on historical HQT capital additions.*

#### Questions:

- a) With respect to Reference ii), please provide Tables and Excel spreadsheet with historic data for HQT capital additions (forecast and actual) from 2008-2020 where they are:
- i) not generating additional revenue; and
  - ii) generating additional revenue.
- Provide basic statistics, - difference (ecart), difference % (ecart%) Average above/below, Standard Deviation.

Provide graphical representation(s) of data.



**Réponse :**

1            **OC is invited to consult the answers to informations requests 1.2.1 and 1.2.2 of**  
2            **Régie. Beyond these answers, Dr. Makhholm finds that the information required**  
3            **by the intervener relates to a level of detail that goes beyond the scope of**  
4            **his evidence.**

b) Using the annual capex differences (écart) in the table/spreadsheet above, please provide (a) table(s) and spreadsheet showing the change (écart) in dollars and % (écart%) relative to the revenue requirement for each year.

**Réponse :**

5            **Please see the answer to question 5 a).**

c) Based on this analysis, comment whether the year over year differences in capital and revenue requirement are material enough to justify a capital in-service variation account.

**Réponse :**

6            **Please see the answer to question 5 a).**

d) Please provide the amounts of capital contributions for each of the historic years. Please breakdown the contributions into subsets, related to HQT business, such as Distribution, Generator, Export/intertie. (categories to be selected by HQT).

**Réponse :**

7            **Please see the answer to question 5 a).**

e) What capital contributions are forecast related to the HQT supply plan outlook for 2021-2027 in absolute terms and percentage of capital.

**Réponse :**

8            **Please see the answer to question 5 a).**

- 6. References:**
- i) D-2021-123, B-0011
  - ii) B-0039, page 26, Table 24

**Preamble:** OC wishes to better understand HQT’s management of large transmission projects requiring approval by the Régie.

**Questions:**

- a) Please provide a listing of large projects 2015-2020 and if these were commissioned for the domestic market, export market or both.

**Réponse :**

1 **Dr. Makholm finds that the information required by the intervener relates to a**  
 2 **level of detail that goes beyond the scope of his evidence. Moreover, this type**  
 3 **of information is irrelevant to his report and findings.**

- b) Please complete the following table based on reference ii) Table 24 including by the addition of two columns as highlighted. Please provide the response in both PDF and Excel formats.

**Tableau 24**  
**Dépassement de coûts de projets autorisés en vertu de l’article 73 de la LRÉ (M\$)**

Projets	Décision Régie	Valeur autorisée Régie	Valeur autorisée HQ <sup>1</sup>	Prévision <sup>2</sup>	Mise en service finale réelle et prévue	Suivi administratif
Ligne Grand-Brûlé - Dérivation Saint-Sauveur (R-3960-2016)	D-2016-130	98,0	119,1	128,6	2019	31 mai 2019
Ligne Grand-Brûlé - Dérivation Saint-Sauveur (R-3960-2016)	D-2016-130	98,0	119,1	128,6	2019	29 mai 2020
Ligne Grand-Brûlé - Dérivation Saint-Sauveur (R-3960-2016)	D-2016-130	98,0	119,1	128,6	2019	31 mai 2021
Reconstruction de lignes à 120kV à Gatineau (R-4016-2017)	D-2018-028	51,6	66,7	66,0	2020	28 janvier 2021
Construction d'une nouvelle section à 120 kV et au remplacement d'un transformateur à 230-120 kV au poste de la Chaudière (R-4023-2017)	D-2018-051	47,4	58,6	58,6	2021	22 avril 2021
Construction d'une ligne à 735 kV entre les postes Micoua et du Saguenay (R-4052-2018)	D-2019-087	792,7	1000,8	1000,8	2023	31 mai 2021
Remplacement de transformateurs à 315-120 kV et l'ajout d'une section à la 25 kV au poste La Prairie (R-4029-2017)	D-2018-059	57,3	45,1	42,5	2022	31 mai 2021
Reconstruction d'une ligne souterraine entre les postes Beaumont et Dorchester (R-4071-2018)	D-2019-039	25,6	34,2	34,2	2021	8 avril 2020

Note 1: Correspond à la nouvelle valeur autorisée par la PDG et/ou au Conseil d'administration d'HQ puisqu'elle dépasse de plus de 15% la valeur initialement autorisée par ceux-ci.  
 Note 2: Correspond à la nouvelle prévision du projet telle que fournie à l'état d'avancement des projets majeurs du dernier rapport annuel (Rapport annuel 2020 du Transporteur, B-0016, HQT-6 Document1).

Project	Decision and Date Approved	Forecast In Service Capital cost	Forecast In service commissioning date	Forecast Impact on Revenue Requirement Year 1	Actual in Service Capital cost	Actual in service commissioning date	Actual Impact on Revenue Requirement Year 1
Grand- Brule							
La Prairie Transformers							
Micoua-Saguenay							

**Réponse :**

- 1 **Dr. Makhholm finds that the information required by the intervener relates to a**
- 2 **level of detail that goes beyond the scope of his evidence. Moreover, this type**
- 3 **of information is irrelevant to his report and findings.**

**Other Jurisdictions**

**7. Reference: i) EB-2021-0110 Hydro One Networks Joint Rate Application<sup>3</sup>**

**Preamble:** Reference i) indicates that Hydro One Transmission has an OEB-approved capital in-service variance account (Account 2405).

**Questions:**

- a) Were Hydro Québec and NERA aware of this account?

**Réponse :**

- 4 **NERA was not.**
- 5 **Le Transporteur est au courant de la référence i) mais il souligne que ce compte**
- 6 **visé un sujet qui n'a pas d'application dans la présente demande.**

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<sup>3</sup> OEB EB-2020-0110 Hydro One Networks Joint Rate Application  
 Exhibit G Tab1 Schedule1 Page 19 Section 3.14 Capital In-Service Variation Account 2405  
<https://www.rds.oeb.ca/CMWebDrawer/Record?q=CaseNumber=EB-2021-0110&sortBy=recRegisteredOn-&pageSize=400>

b) If so, why was this not referenced?

Réponse :

1           **Please see the answer to question 7 a).**

c) Has NERA searched for other examples of Capital Deferral/Variance Accounts in North America? What was the result?

Réponse :

2           **Dr. Makholm, as a result of his search, provided Table 2 to his evidence to**  
3           **illustrate applications of deferral and variance accounts.**

d) Specifically, is Hydro One Transmission the only example in Ontario?

Réponse :

4           **Dr. Makholm has not identified such an example.**

e) Please review Reference i) and evidence extract and provide comments relative to the HQD DVA issue pending in the current case.

Réponse :

5           **Dr. Makholm examined Reference i) and in his opinion, the underlying facts are**  
6           **different from the case in the reference.**

**8. Reference:**           i)       **Ontario Energy Board Filing Guidelines**  
**Transmission<sup>4</sup>**

**Preamble:** The OEB Filing Requirements for Transmission Applications include Transmission System Plans for capital(Section 2.4).

**Questions:**

a) Please provide the reference(s) for HQT filing requirements and specifically for long term system capital plans

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<sup>4</sup> <https://www.oeb.ca/regulatory-rules-and-documents/rules-codes-and-requirements/filing-requirements-transmission-distribution-applications>

**Réponse :**

- 1            **Le Transporteur estime que l'information demandée est sans pertinence au sujet**  
2            **en cause.**

b) Please compare the Guidelines applicable to HQT to Ontario's.

**Réponse :**

- 3            **Voir la réponse à la question 8 a).**

c) Please comment/discuss material differences.

**Réponse :**

- 4            **Voir la réponse à la question 8 a).**

## **Annexe 1**

### **Réponse à la question 3.a**



# Prudence: Under Strain in California

Jeff D. Makholm

**M**y International Energy columns often enough highlight the difficulty in agreeing on a common regulatory language for energy utilities, especially in an international context. In October 2017, I contrasted how different regulators, even within the English-speaking world, use vastly different techniques for gauging efficiency in the utilities they regulate.<sup>1</sup> In June 2018, I reviewed the various international methods developed for incentive regulation.<sup>2</sup> In the previous column in October 2019, I charted how a revamped regulatory formula, appearing more than three decades after modern US utility regulation began in the early twentieth century,

finalized what has become the standard US regulatory model.<sup>3</sup>

A core feature of those columns was discussion of the basic foundations of regulation, where regulations come from, and how they work. Perhaps the most basic feature of the success of regulation in the United States is *prudence*: the way US regulators judge the efficiency and efficacy of utility investment and expenditures that are recoverable through regulated rates. Prudence, as part of regulated ratemaking, is a US invention. But the concept, long effective as a basic regulatory tool, is under threat in California—an illustration perhaps of the limitations of the traditional prudence standard in a case where new and unpredictable costs, not related to utility decision-making around investments or operations, threaten the credit of electric utilities there.

<sup>1</sup> Makholm, J. D. (2017, October). Regulating utility efficiency ‘fast and slow’: The current Australian problem. *Natural Gas & Electricity*, 34(3), 28–32.

<sup>2</sup> Makholm, J. D. (2018, June). Incentive regulation 3.0 for electric utilities. *Natural Gas & Electricity*, 34(11), 25–29.

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He wishes to thank Emily L. Crawford for her research assistance.

## THE INVENTION OF THE PRUDENCE STANDARD

The first of the modern regulatory statutes appeared in Wisconsin and New York in 1906. Written independently, both were the result of a major 1905–1906 study of the efficacy of investor-ownership in US utilities.<sup>4</sup> While those statutes established a reliable governing structure for regulation, they left a number of major items outstanding to be determined later: accounting, permissible investment

<sup>3</sup> Makholm, J. D. (2019 October), Why publicize? part II: When public ownership gained ground in the US electricity industry. *Natural Gas & Electricity*, 33(3), 29–32.

<sup>4</sup> National Civic Federation. (1907). *Municipal and private operation of public utilities* (3 vols.), New York: Author.

and operating costs, and the basis for private utility return on investment. The early attention of regulatory commissions and the courts (that reviewed commission decisions on appeal) was the “value” of the rate base. That focus on value followed a general distrust of the record keeping of utilities in an era before reliable accounting or the Securities and Exchange Commission (which was created by Congress with the 1934 Securities Exchange Act).

But that focus on the value of the rate base, rather than cost, came close to dooming the private regulatory model in the eyes of economists like James C. Bonbright. Those economists could see that in the context of regulated ratemaking, value was circular (and thus unworkable—the cart before the horse). US Supreme Court Associate Justice Louis Brandeis agreed. Against the majority on the Supreme Court, he worked to substitute cost for value in regulated ratemaking. But in doing so, he knew that the next question to be asked was *which costs*? Thus, Brandeis had to define some boundaries on the definition of rate base, and the cost-of-service formula.

Brandeis proposed a purposeful regulatory filter through which all costs would have to pass to be part of the ratemaking formula. That filter would prohibit judging the efficiency of costs via hindsight and would also embrace a presumption that utility management has acted “prudently” in its investment decisions.<sup>5</sup> His objective was the reasonable continuation of a utility enterprise that could maintain uninterrupted access to low-cost investor capital on reasonable terms. A “prudent investment” was one made with reasonable judgment and, “under ordinary circumstances, would be deemed reasonable” absent “dishonest or obviously wasteful or imprudent expenditures.”<sup>6</sup> As he wrote:

The adoption of the amount prudently invested as the rate base and the amount of the capital charge as the measure of the rate of return would

<sup>5</sup> “Every investment may be assumed to have been made in the exercise of reasonable judgment, unless the contrary is shown.” *Missouri ex rel. Southwestern Bell Tel. Co. v. PSC*, 262 U.S. 276 (1923).

<sup>6</sup> *Missouri ex rel. Southwestern Bell Tel. Co. v. Public Svc. Comm’n*, 262 U.S. 276, 289 (1923) (“*Missouri*”), note 1.

give definiteness to these two factors involved in rate controversies which are now shifting and treacherous, and which render the proceedings peculiarly burdensome and largely futile. Such measures offer a basis for decision which is certain and stable. The rate base would be ascertained as a fact, not determined as a matter of opinion.<sup>7</sup>

Brandeis’ purpose was promoting *orderly action* where the *private interests* of utility investors intersected with the *public interest* at large. He wished to harmonize the relations between those parties who are otherwise in actual or potential conflict. According to his friend economist John R. Commons, who wrote about Brandeis’s reasoning, “What is wanted is not truth, but orderly action. The concern must be kept agoing.”<sup>8</sup>

US regulators apply innumerable minor instances of “imprudence” as regulatory commission staffs assess normal rate cases.

The force of Brandeis’s reasoning, informed by his firsthand dealings with utilities in his pre-Supreme Court career in private practice in Boston, led to the prudence standard becoming US regulatory “common law,” whether written in state statutes or not. US regulators apply innumerable minor instances of “imprudence” as regulatory commission staffs assess normal rate cases. But major imprudence disallowances that threaten the creditworthiness of utilities are uncommon, typified by a few major nuclear power plant cost overruns (decided by the state commission in the 1980s) and two large cost overruns for the Trans Alaska Pipeline System before the Federal Energy Regulatory Commission (FERC).<sup>9</sup> Those cases involved findings of large-scale failures of

<sup>7</sup> *Missouri*, 276.

<sup>8</sup> Commons, J. R. (1934). *Institutional economics*. New York, NY: Macmillan; p. 712.

<sup>9</sup> A list of the 37 largest electric utility cost disallowances—all related to power plants—from 1980 through 1991 appears in: Lyon, T. P., & Mayo, J. W. (2005). Regulatory opportunism and investment behavior: Evidence from the U.S. electric utility industry. *RAND Journal of Economics*, 36, 628–644. For the TAPS case, see FERC Docket Nos. IS09-348-004, et al. and IS09-348-006, et al.



engineering and/or management of those major construction projects.

### STRAINS ON THE PRUDENCE STANDARD IN CALIFORNIA

Three recent events have strained the application of the prudence standard in California: (1) the unprecedented growth in wildfire damages; (2) a unique California wildfire damage compensation system that funnels those costs through electric utilities, whether or not the costs result from negligent behavior (called “inverse condemnation”); and (3) the failure of the California Public Utilities Commission (CPUC) to signal that it will permit such costs to become a normal part of those IOUs’ costs (except in cases involving the high bar related to “dishonest or obviously wasteful” expenditures—the traditional prudence standard).

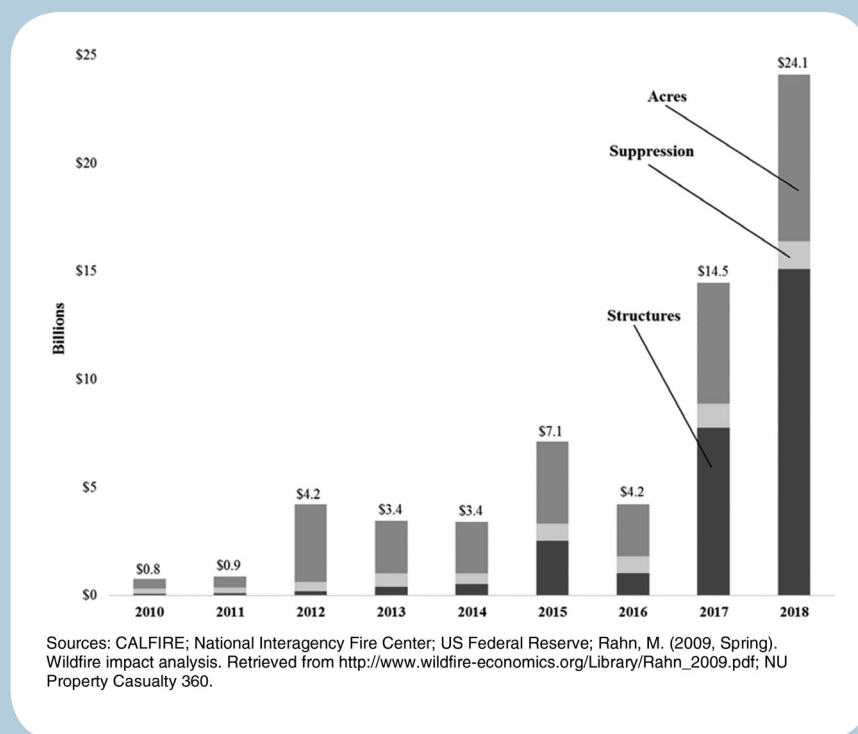
The magnitude of such increases and the composition of costs appear in **Figure 1**. From 2010 to 2018, the total annual cost of wildfire-related damages in California increased from \$0.8 billion to \$24.1 billion.

The large increase in wildfire-related costs comes from both the greater size of the wildfires and the greater number of homes built and damaged in fire-prone areas. Rising temperatures, drier conditions, and heightened tree mortality contributed to the increase in the average size of wildfires. That massive increase in costs from 2017 to 2018, funneled through California’s utilities, is what has led to the loss of credit and/or bankruptcy of California’s electric utilities.

But why funnel those costs through those utilities? Inverse condemnation is a legal concept that entitles property owners to just compensation if their property is damaged by a public use—not an uncommon legal concept. What is uncommon in California is the almost accidental legal precedent there, flowing from minor cases, holding private utilities’ operations as a “public use.” The first application to a utility was in a 1987 case involving a trench dug by a Pacific Gas and Electric (PG&E) contractor.<sup>10</sup> It arose again in a 1999 case regarding Southern California Edison, which referenced a prior 1979 case where the court

<sup>10</sup> *Cantu v. Pacific Gas & Electric Co.* (1987). 189 Cal. App. 3d 160.

**Figure 1.** Estimate of Total Annual Cost of Wildfires in California



opined that utilities were similar enough to government entities that the concept of inverse condemnation should apply to them.<sup>11</sup>

Given the relatively small costs involved, the courts in those California cases did not need to confront the essential differences between publicly and privately owned utilities, which drove those who studied that ownership question in detail in 1905–1906. Those earlier researchers saw that publicly owned utilities are political subdivisions of the state, which can *conscript* capital from taxpayers—which they thought useful in the United Kingdom at the time, but not a wise choice given the far more dominant role of private capital in US business and infrastructure generally. Private utilities must *attract* capital from a competitive capital market, which has alternative investments to choose. Applying the traditional prudence standard to costs of the magnitude shown above has had serious consequences regarding the continuation of investor ownership of electric utilities in California.


The wildfire problem brought the latent problem out into the open. In dealing with the costs for 2007 fires involving San Diego Gas and Electric Company (SDG&E), the CPUC concluded that the company failed to meet the “prudent manager standard” for those fires and disallowed \$379 million—meaning that SDG&E could not collect those wildfire costs in its rates.<sup>12</sup> For precedent, the CPUC referenced three cases regarding minor disallowances for imprudence involving problematic installations regarding the utilities’ own constructed plant.

The CPUC did not ask a follow-up question that looms large today: for costs that have risen to great heights due to factors outside the utilities’ control (rising temperatures, drier conditions, heightened tree mortality, the Santa Ana winds,

rising home construction in the wildland-urban interface), is a different standard warranted when the old standard is such a threat to the creditworthiness of California’s electric utilities? The Brandeis prudence test, designed to support reliable continuity with the private utility model, plainly cannot work in a situation where the failure to collect even part of the 2017–2018 wildfire costs would bankrupt those utilities, absent “dishonest or obviously wasteful or imprudent” behavior.

The strains in the traditional prudence model were apparent when PG&E announced on January 14, 2019, that it was filing for Chapter 11 bankruptcy in response to the financial challenges associated with the 2017 and 2018 fires in its service territories.<sup>13</sup> Unlike PG&E’s 2011 bankruptcy filing, spurred by a visible problem of a shortage in funds in the wake of the California Energy Crisis, the 2019 filing was seemingly driven by risk: the risk that a negative prudence finding, now representing many billions of dollars, could not be borne without the protection of the bankruptcy court.

A clearer remedy would be to examine again the thin thread of precedent applying a “public use” principle to private utility operations.

Dealing with the strain on the prudence standard as it applies to wildfires in California is a work in progress. The California legislature passed legislation in August 2019 trying to remedy the pressure on the credit of those utilities (Assembly Bill 1054).<sup>14</sup> But evidence from the securities markets reveals no significant lessening of risks in investors’ eyes.<sup>15</sup> A clearer remedy would be to examine again the thin thread of precedent applying a “public use” principle to private utility operations. But in either case, there is no evident solution yet to the problem of applying Brandeis’s prudence standard—designed to promote stable continuity but now causing such great uncertainty—in California. 

<sup>13</sup> <http://www.utilitydive.com/news/pge-files-for-2nd-bankruptcy-ignoring-investor-pleas/547036>.

<sup>14</sup> [http://leginfo.ca.gov/faces/billNavClient.xhtml?bill\\_id=201920200AB1054](http://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=201920200AB1054).

<sup>15</sup> Prepared Direct Evidence of Richard Hern, Ph.D., NERA, before the California Public Utility Commission in 2020 Cost of Capital Proceeding, August 1, 2019.

<sup>11</sup> “[We are not] convinced that any significant differences exist regarding the operation of publicly versus privately owned electric utilities as applied to the facts in this case.” *Barham v. Southern California Edison Company* (1999) 74 Cal. App. 4th 744. “[A] public utility is in many respects more akin to a governmental entity.” *Gay Law Students Assn. v. Pacific Tel. & Tel. Co.* (1979) 24 Cal. 3d 458, 469.

<sup>12</sup> For the Witch Wildfire, the CPUC deemed to be “unreasonable” SDG&E’s response to the faults along the transmission line that caused the fire (TL 637). For the Guejito Wildfire, the CPUC faulted SDG&E’s fire patrol protocols. For the Rice Fire, the CPUC found that the utility did not appropriately manage a sycamore tree that fell onto an overhead conductor; pp. 27, 35, 42.