Emera Maine

JULY 17, 2018

Northern Maine Transmission Discount Decision

The Request for a Transmission Rate Discount

- ReEnergy announced plans to close its Ashland & Fort Fairfield biomass generators on 10/1/18 unless they establish a more favorable financial outlook.
- ReEnergy asked Emera Maine (EM) to grant a full discount of transmission use* charges effective 10/1/18.
- EM assessed the rates effect to other customers, and shared that information and general information at MPUC meetings on March 21 and May 9, and again at a PAG meeting on May 30.
- EM received several letters from stakeholders, mostly in the forest products and agricultural industries, urging EM to provide the transmission discount requested to help keep the plants open and potentially save jobs.
- EM engaged an independent expert, London Economics, to help validate the need for the discount.
- This presentation will focus on that analysis and path forward.

***** *Schedules 7 and 8 charges are found in EM's Open Access Transmission Tariff (OATT), and represent charges for generators who use the transmission system to export their energy out of Northern Maine to other markets, primarily ISO New England.*

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Basics on Transmission Usage by Generators

- Generators who use the transmission system to export their energy to other markets, out of northern Maine, are assessed a tariff.
- The amount EM collects from generators directly offsets costs to other customers who consume electricity.
- The amount they pay is a function of their production quantity and the rate.
- The rate is updated annually in June, and found on the EM website. Rates per kw-Mo:

June 2014 - May 2015	June 2015 - May 2016	June 2016 - May 2017	June 2017 - May 2018	June 2018 - May 2019
3.00	2.88	4.27	5.49	4.44

- Transmission wheeling is approximately 10% of ReEnergy's costs in the recent London Economics assessment for the years 2018-2021.
- Sample calculation: 30 MW x $4.44 x 1000 = $133,000 a month or $1.6m/yr.

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The Rates from the EM Website

EMERA MAINE – MAINE PUBLIC DISTRICT OATT
ATTACHMENT J FORMULA RATES
RATE YEAR JUNE 1, 2018 TO MAY 31, 2019
ESTIMATED ATRR & CHARGES BASED ON ACTUAL CY 2017 VALUES

ATTACHMENT J
EXHIBIT 1a

Summary of Charges for Wholesale Customers		a	b	c = b / 12	d = b / 52	e = d / 5	f = e / 16	
Line	Description	Value	Yearly $/kW/Yr (Note 3)	Monthly $/kW/Mo (Note 3)	Weekly $/kW/Wk (Note 3)	Daily $/kW/Day (Note 4)	Hourly $/kW/Hr (Note 5)	Reference(s)
1	**Schedule 1 - Scheduling, System Control and Dispatch Service**							
2	Annual Cost	$ 451,157						Exhibit 10 at 10a
3	Applicable 12-CP Demand kW Value	101,320						Exhibit 8 at 14a * 1000
4	Rate		$ 4.45	$ 0.37	$ 0.09	$ 0.018	$ 0.0011	4b = 2a / 3a
5								
6	**Schedule 2 - Reactive Supply and Voltage Control**							
7	Annual VAR Charges ($)	$ 90,000						Note 1
8	Applicable 12-CP Demand kW Value	101,320						Exhibit 8 at 14a * 1000
9	Rate		$ 0.89	$ 0.07	$ 0.02	$ 0.004	$ 0.0003	9b = 7a / 8a
10								
11	**Attachment H - Network Integration Transmission Service (NITS)**							
12	Annual Transmission Revenue Requirement	$ 5,400,809						Exhibit 2 at 39a
13	Applicable 12-CP Demand kW Value	101,320						Exhibit 8 at 14a * 1000
14	Rate		$ 53.30	$ 4.44	$ 1.03	$ 0.206	$ 0.0129	14b = 12a / 13a
15								
16	**Schedule 7 - Long Term or Short Term Firm Point to Point (PTP)**							
17	Annual Transmission Revenue Requirement	$ 5,400,809						Exhibit 2 at 39a
18	Applicable 12-CP Demand kW Value	101,320						Exhibit 8 at 14a * 1000
19	Rate		$ 53.30	$ 4.44	$ 1.03	$ 0.206	$ 0.0129	19b = 17a / 18a
20								
21	**Schedule 8 - Non-Firm Point to Point (PTP)**							
22	Annual Transmission Revenue Requirement	$ 5,400,809						Exhibit 2 at 39a
23	Applicable 12-CP Demand kW Value	101,320						Exhibit 8 at 14a * 1000
24	Rate		$ 53.30	$ 4.44	$ 1.03	$ 0.206	$ 0.0129	24b = 22a / 23a, Note 2, Note 6

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What's at Stake?

- If ReEnergy closes, this results in a cost shift to other electricity customers.
- If ReEnergy is granted a full discount and stays open, the same cost shift happens.
- ReEnergy paid $3.6m to EM over the past 4 years on average.*
- This $3.6m funded approximately 42% of EM's total cost to own and operate the northern Maine *transmission* system.
- Some stakeholders urge EM to grant a discount, with the belief that the community is better off keeping the jobs and benefiting from the indirect economic activity.

Customer Class	Estimated Annual Rate Increase
Residential Service (A)	$41
General Service (C)	$104
Agricultural Produce storage (F)	$532
Medium Power Secondary (ES)	$2,666
Medium Power Primary (EP)	$8,677
Large Power Primary (EPT)	$32,161
Large Power Secondary (EST)	$23,431
Transmission Power (HT)	$108,404
Sub-transmission Power (ST)	$49,878
Eastern Maine Electric Coop	$119,923
Houlton Water Company	$751,468
Van Buren Light & Power Co.	$94,424

* *These figures were provided by Emera Maine in a March 30, 2018 reply to the MPUC-led stakeholder discussion.*

** *These figures were provided by Emera Maine at a May 30, 2018 PAG meeting.*

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What letters have been received by EM?

Row	Name	Affiliation / Profession	Supports Discount?
1	Glenn Collin	Forestry Equipment Operator, TNT Road Company	Yes
2	Jason Ray	Grinder Operator, TNT Road Company	Yes
3	Trevor Bouchard	Forestry Equipment Operator, TNT Road Company	Yes
4	Andrew Bouchard	Grinder Operator, TNT Road Company	Yes
5	Jon	Truck Driver, TNT Road Company	Yes
6	Ervin Levesque	Forestry Equipment Operator, TNT Road Company	Yes
7	Joe Dubois	Truck Driver, TNT Road Company	Yes
8	Dale Boyd	Truck Driver, TNT Road Company	Yes
9	Paul Raymond	Truck Driver, TNT Road Company	Yes
10	Tyler Pinette	Truck Driver, TNT Road Company	Yes
11	Maurice Michaud	Truck Driver, TNT Road Company	Yes
12	Bruce Belanger	Truck Driver, TNT Road Company	Yes
13	Todd Levesque	Truck Driver, TNT Road Company	Yes
14	Jake Soucy	Truck Driver, TNT Road Company	Yes
15	Keith Theriault	Truck Driver, TNT Road Company	Yes
16	Jason Thibodeau	Truck Driver, TNT Road Company	Yes
17	Claude Collin	Grinder Operator, TNT Road Company	Yes
18	Ken Deprey	Forestry Equipment Operator, TNT Road Company	Yes

Continued on next slide.

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What letters have been received by EM?

Row	Name	Affiliation / Profession	Supports Discount?
19	Steve Theriault	Logging & Trucking Business, TNT Road Company	Yes
20	Shannon Giles	Owner, Maine Environmental LLC (Fly Ash Services)	Yes
21	L. Williams	Will-Turn Farms, LLC (900 acre potato farm)	Yes
22	G. James & Richard James	Lucerne Farms (2500 acre hay/alfalfa farm)	Yes
23	P. ____	Powers Enterprises (agriculture)	Yes
24	Botha?	Botha Family Farm LLC (286 acre farm)	Yes
25	David Gordon	Katahdin Cedar Log Homes	Yes
26	Robert B___	Welder, Backwoods, Inc.	Yes
27	Robbie Aucoir	Mechanic, Backwoods, Inc.	Yes
28	Tyler Bevauy	Mechanic, Backwoods, Inc.	Yes
29	Luke Wiley	Truck Driver, Backwoods, Inc.	Yes
30	James Quint	Truck Driver, Backwoods, Inc.	Yes
31	Tyler Bartlett	Grinder Operator, Backwoods, Inc.	Yes
32	Randy Mclaughlin	Grinder Operator, Backwoods, Inc.	Yes
33	Christopher Nichols	Seven Islands Land Company, Portage Woods Products & Maine Woods Company	Yes
34	Joseph Davis	Supervisor, Davis Forestry Products	Yes
35	Bob Dorsey	President & CEO, The Aroostook Partnership	Yes
36	Greg Sherman	General Manager, Houlton Water Company	More information required; prefer another pathway forward

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What are we hearing? *(TNT, Forest Products)*

- “ReEnergy’s [facilities] play an important role in the region and support many jobs.”
- “Closure of these two facilities would eliminate a valued resource for many companies and would remove an important aspect of the forest products chain.”
- “… closure of those facilities would cause harm to the forest products economy and the regional grid.”
- “Those two facilities together spend more than $45 million per year in operating expenses, a significant percentage of which is paid for the purchase of fuel from local logging contractors and sawmills.”
- “Without ReEnergy, our business and the 50 jobs it represents would be put at risk.”
- “I hope that Emera considers the important role that ReEnergy facilities play in the larger economy.”

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What are we hearing? *(Various, Agriculture)*

- "Fly Ash is a byproduct of the Biomass being burned and condensed … and is rich with nutrients and minerals … used as highly valued part of the local farming crop and nutrient management programs."
- "… upwards of 70 individual farms [~8,000 acres] in Aroostook County that all consider Fly Ash … as a significant role in their annual crop liming/nutrient needs."
- "We use the wood ash produced from the ReEnergy facilities on our fields as a lime substitute which is approved for use by Maine Organic Farm Grower Association."
- "We have used this ash for years and our farm relies on its liming benefits as well as the significant cost savings compared to traditional fertilizers."
- "Without ReEnergy's Wood Ash, our business would suffer a financial blow as we would be forced to pay for higher priced alternatives to maintain crop yields provided by the Wood Ash."
- "We strongly urge Emera to take this impact statement into consideration…"

What are we hearing? *(KFP, manufacturing)*

- “We understand that a result of the transmission discount to generators would be the reapportionment of those costs to customers across the county.”
- “We strongly feel that without this discount that ReEnergy may be gone in a short period of time, and those costs would be reapportioned to those customers across the county anyway.”
- “Katahdin Forest Products relies heavily on ReEnergy accepting a portion of our mill residue and without them the future viability of our company and our 75 employees may be in jeopardy.”

What are we hearing? *(Backwoods & Davis Forestry Products)*

- "ReEnergy's biomass power facilities in Ashland and Fort Fairfield play an important role in the region and support many jobs."
- "Closure of these two facilities would eliminate a valued resource for many companies and would remove an important aspect of the forest products chain."
- "It would leave us with no markets for our biomass products."
- "I hope that Emera considers the important role that ReEnergy facilities play in the larger economy."

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What are we hearing? (*Houlton Water Company)*

- "Northern Maine customers will pay higher transmission rates and will not realize any benefits which should flow through to lower or stabilize energy rates."
- "…cost information should be shared with a third party for review."
- "… new entities considering developing generation in Northern Maine will also benefit from the proposed discount ..."
- "Does Northern Maine have a guarantee that ReEnergy plants will operate for the benefit of the logging contractors, ReEnergy employees and electric utility customers or we simply under threat of a shutdown and loss of wheeling credits from ReEnergy?"
- "… Northern Maine customers will pay higher transmission rates and will not realize any benefits which should flow through to lower or stabilize energy rates."
- "Northern Maine customers are in effect subsidizing ReEnergy in exchange for allowing them to participate in the IS-NE market, <u>but with nothing being guaranteed for the customers in the Northern Maine Market</u>."

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What questions needed to be answered?

- **<u>In</u> Scope for Emera Maine:**
  - Is ReEnergy's assertion that a discount on certain transmission costs is required in order to help avoid plant closure valid?
    - Analysis must be baselined to 2017 actuals.
    - Other customers want to see enough information to validate the need.
    - Seeing the relative percent of total for each revenue and cost category will be helpful.
  - What level of assistance will be required to help make ReEnergy's operations viable?
  - What is the appropriate period of time to consider, should a discount be shown to be needed?
- **<u>Not in</u> Emera Maine's Scope:**
  - Is ReEnergy operating at their full potential? How do they compare with others in their industry?
  - Will ReEnergy be willing to provide guarantees to, for example, remain operational or utilize local fuel and other products and/or services?
  - Can we find a way to garner supply-side savings at the same time they are asking for a discount?
  - Does Northern Maine have a guarantee that the ReEnergy will operate for the benefit of the local economy?

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London Economics Indicative Financial Analysis

Stage 1 – Indicative Financial Analysis using public data sources and expert opinion

- Create a model to present a range of outcomes
  - Identify a range of market revenues that power plants can early from the sale of energy, capacity and RECs
  - Estimate operating costs
  - Result in a pro forma income statement for years 2018-2021, as well as a 2017 “backcast”
  - Replicate this across five scenarios
    - Central case
    - Lower energy case
    - Higher energy case
    - Lower average annual capacity factor case
    - Lower capacity commitment revenue case

Stage 2 – Refined Financial Analysis using ReEnergy’s proprietary data

- Update model above with actual information from 2017 & reassess forecast

London Economics Results

Based on an indicative forward-looking financial analysis, both Ashland and Fort Fairfield biomass plants have negative plant level EBITDAs in all scenarios tested by LEI for the 2018 to 2021 timeframe

Under the Central Case, the plants could achieve a break-even EBITDA ($0) with the following levels (in percentage terms) of relief from the Schedule 7/8 transmission charges:

Plant	4Q2018	2019	2020	2021
Ashland	100%*	~90%	~50%	~30%
Fort Fairfield	100%*	100%*	~98%	~85%
Portfolio composite	**100%***	**100%***	**~75%**	**~55%**

A full relief on the Schedule 7/8 transmission charges improves EBITDA, but the EBITDA remains slightly negative

Portfolio composite = percentage of transmission relief needed at a portfolio level EBITDA (Ashland + Fort Fairfield) to break-even

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London Economics Analysis of 2017

Values are in thousand USD	Ashland		Fort Fairfield	
	2017 Actual	2017 LEI Estimate	2017 Actual	2017 LEI Estimate
TOTAL Revenues ($)	19,313	18,363	18,483	16,459
(-) TOTAL Opex ($)	(19,252)	(19,262)	(17,611)	(17,507)
(=) Facility Level EBITDA ($)	61	(900)	872	(1,048)
(+) One-time transmission fee rebate*	1,564	1,564	1,484	1,484
(=) Adjusted EBITDA after the one-time rebate ($)	1,625	665	2,356	436

** Using LEI's calculation of the one-time rebate of transmission fees is based on capacity pro-rata allocation between the two plants of the FERC approved settlement amount.*

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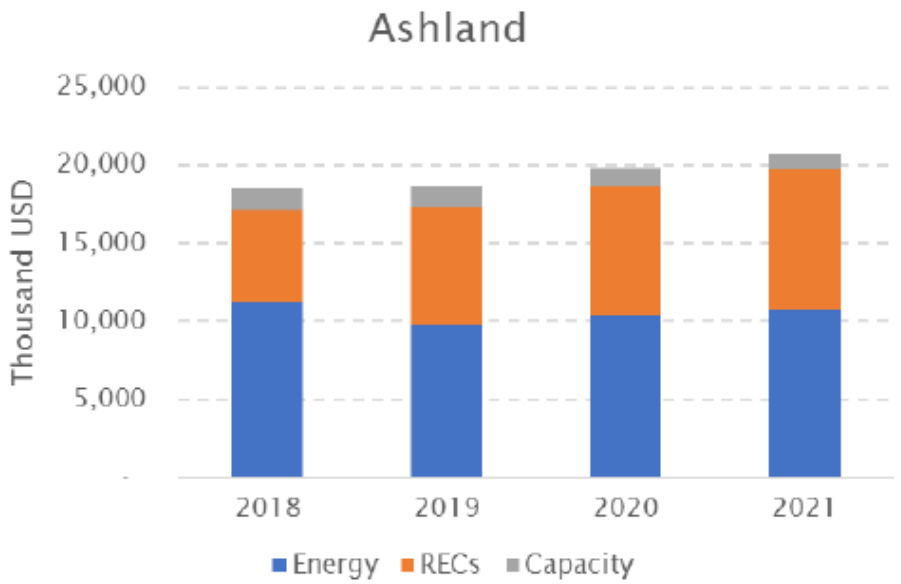
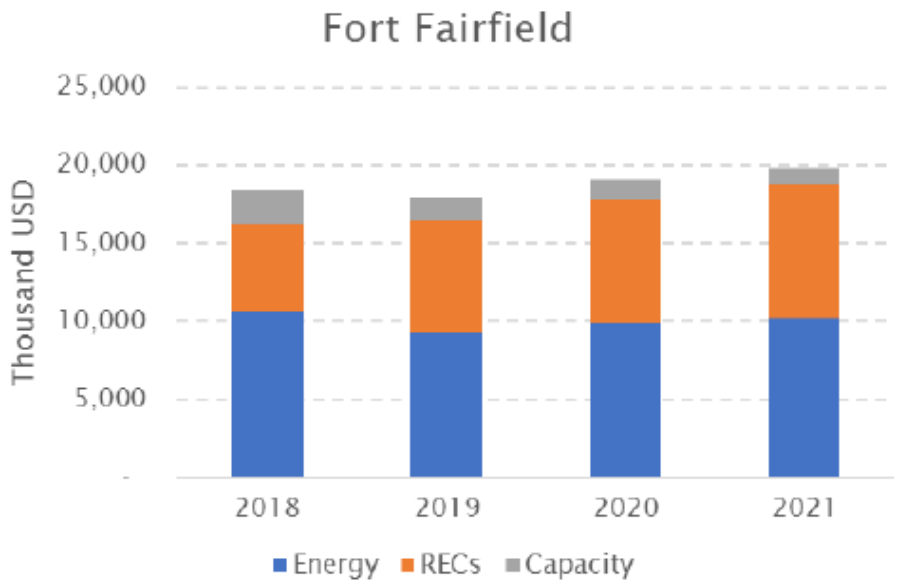
London Economics Revenue Forecast: $18m - $21m/year per plant (central case)





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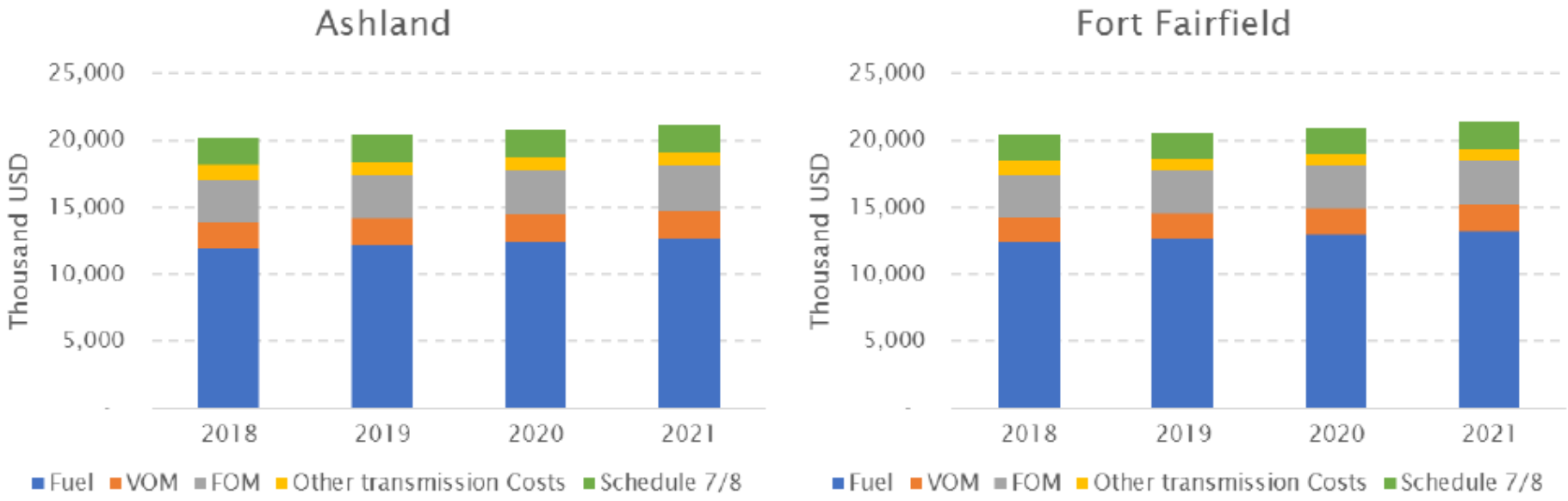
London Economics Operating Cost Estimates: $20m - $22m/year per plant (central case)



VOM = variable O&M costs
FOM = fixed O&M costs
Other transmission costs = New Brunswick Power point-to-point charges and Emera Maine Schedules 1/2 charges

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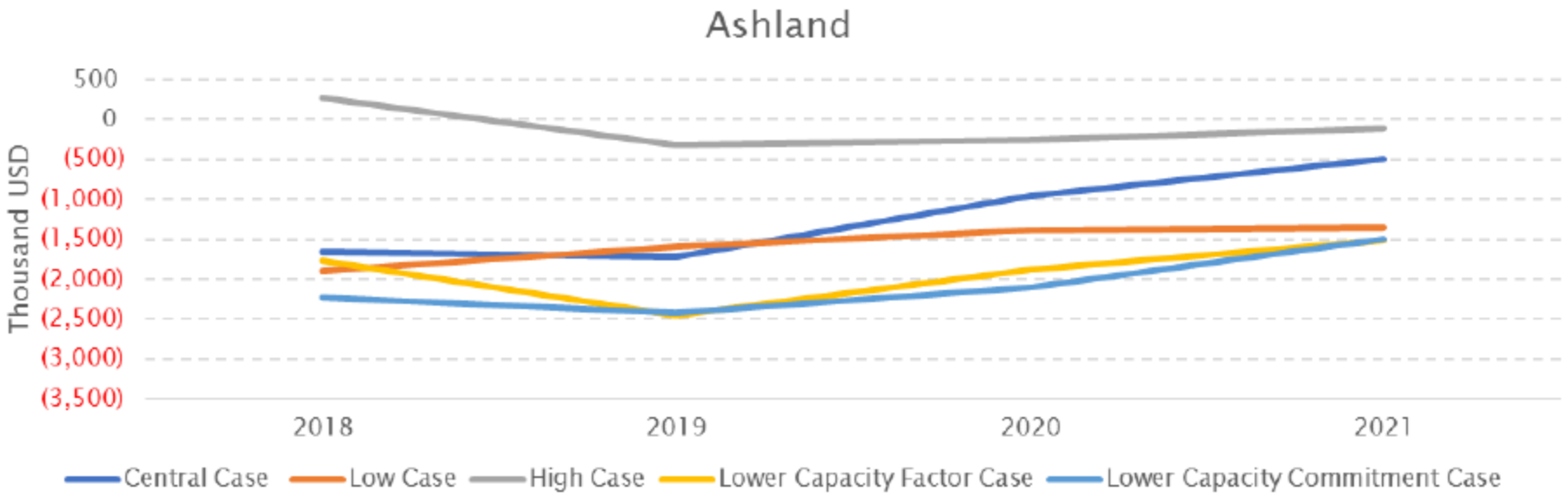
London Economics Results

All scenarios modeled by LEI suggest that both power plants will earn a negative EBITDA* in the next few years



This is a plant-level EBITDA, before any allocated corporate costs and before taking into account any capital costs, depreciation or taxes

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London Economics Results

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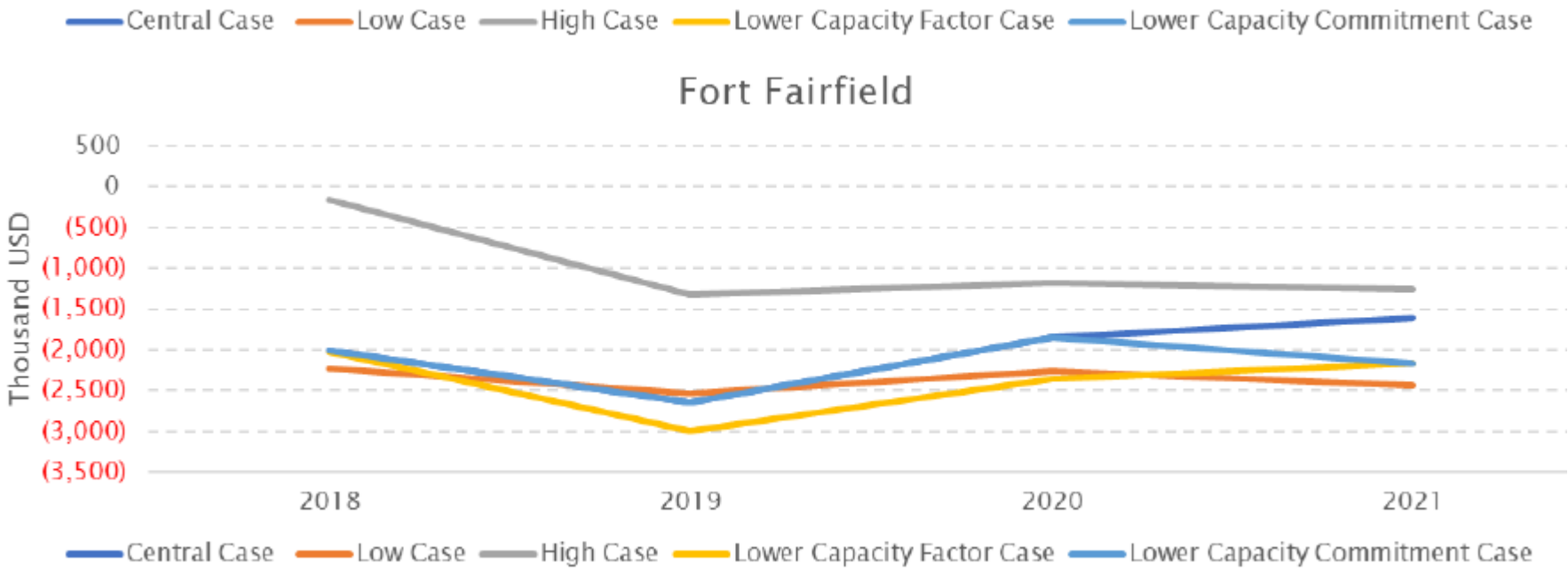

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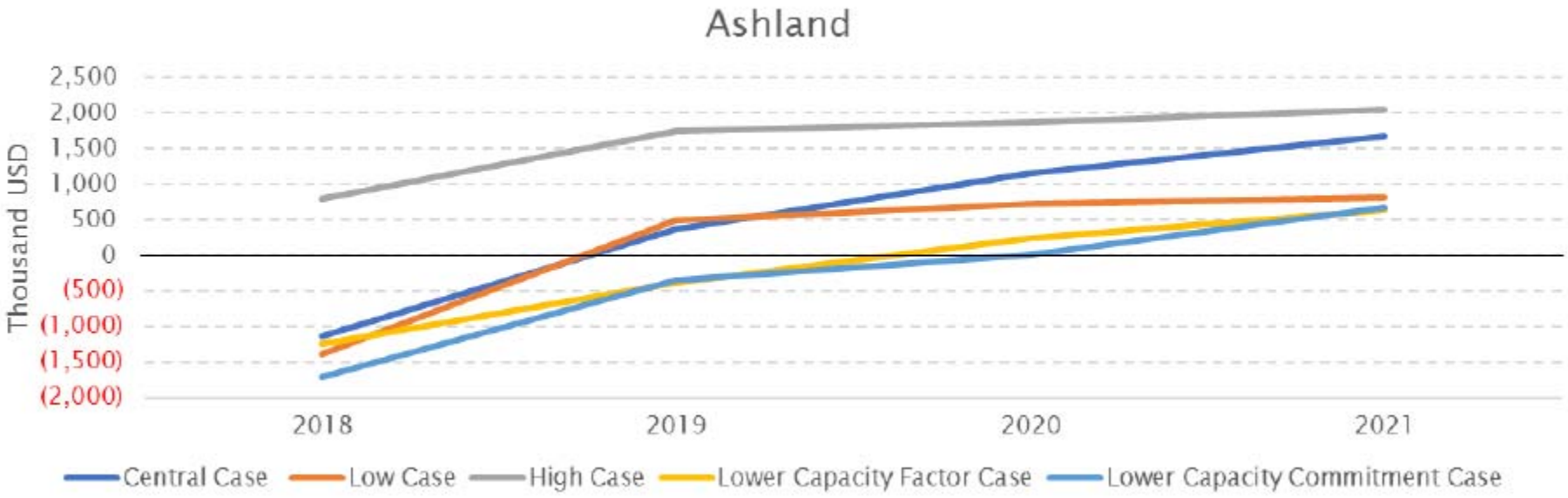
London Economics Results

With a 100% discount on Schedule 7/8 transmission charges, Ashland and Fort Fairfield may earn a positive EBITDA* in some scenarios and some years



*2018 EBITDA only considers a transmission relief in 4Q2018. This is a plant-level EBITDA, before any allocated corporate costs and before taking into account any capital costs, depreciation or taxes

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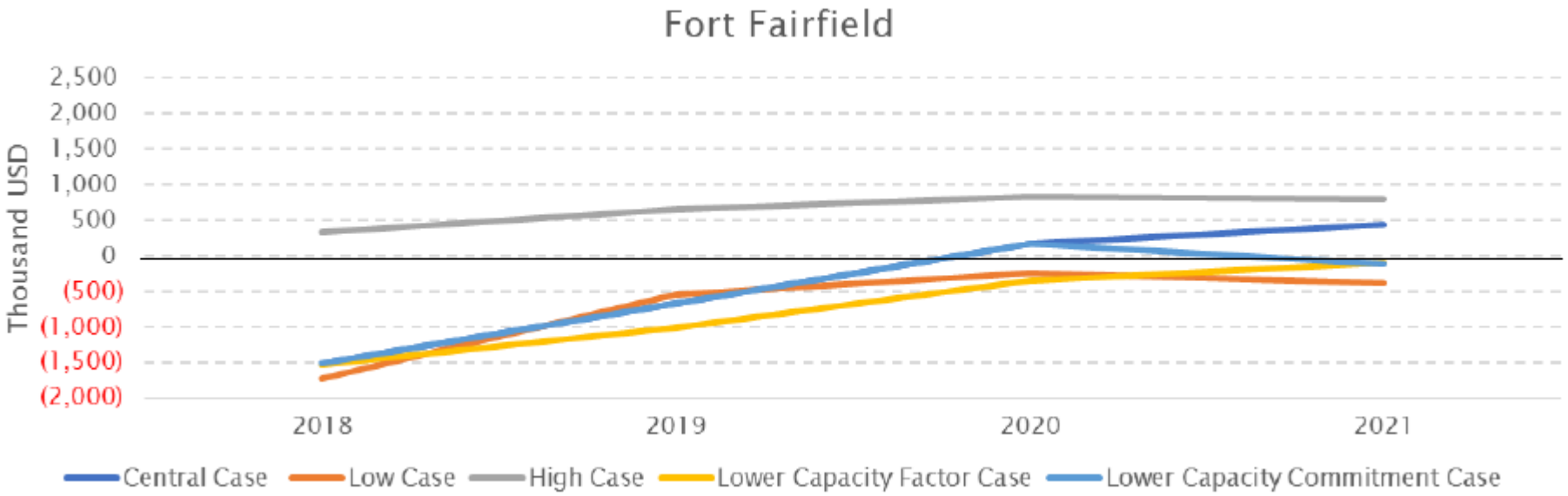
London Economics Results

With a 100% discount on Schedule 7/8 transmission charges, Ashland and Fort Fairfield may earn a positive EBITDA* in some scenarios and some years



*2018 EBITDA only considers a transmission relief in 4Q2018. This is a plant-level EBITDA, before any allocated corporate costs and before taking into account any capital costs, depreciation or taxes

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EM Decision

- Emera Maine will base its decision on a multitude of factors, including the London Economics assessment and stakeholder input.
- The timeline for the decision is by week's end (7/20/18).
- The decision will be communicated to all customers at the same time and posted on our OASIS site.

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Process – Next steps on the discount decision

- Depends on the decision:
  - If no discount, Emera Maine will inform stakeholders and no further action is required.
  - If a discount is to be offered, Emera Maine will inform stakeholders, and file with FERC immediately. Parties have the opportunity to intervene in the FERC proceeding.

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Thank you.

- EM appreciates the time many parties contributed to in making this decision.

Emera Maine