Bipole III Coalition

Manitoba Hydro 2014/15 & 2015/16 General Rate Application To the Public Utilities Board

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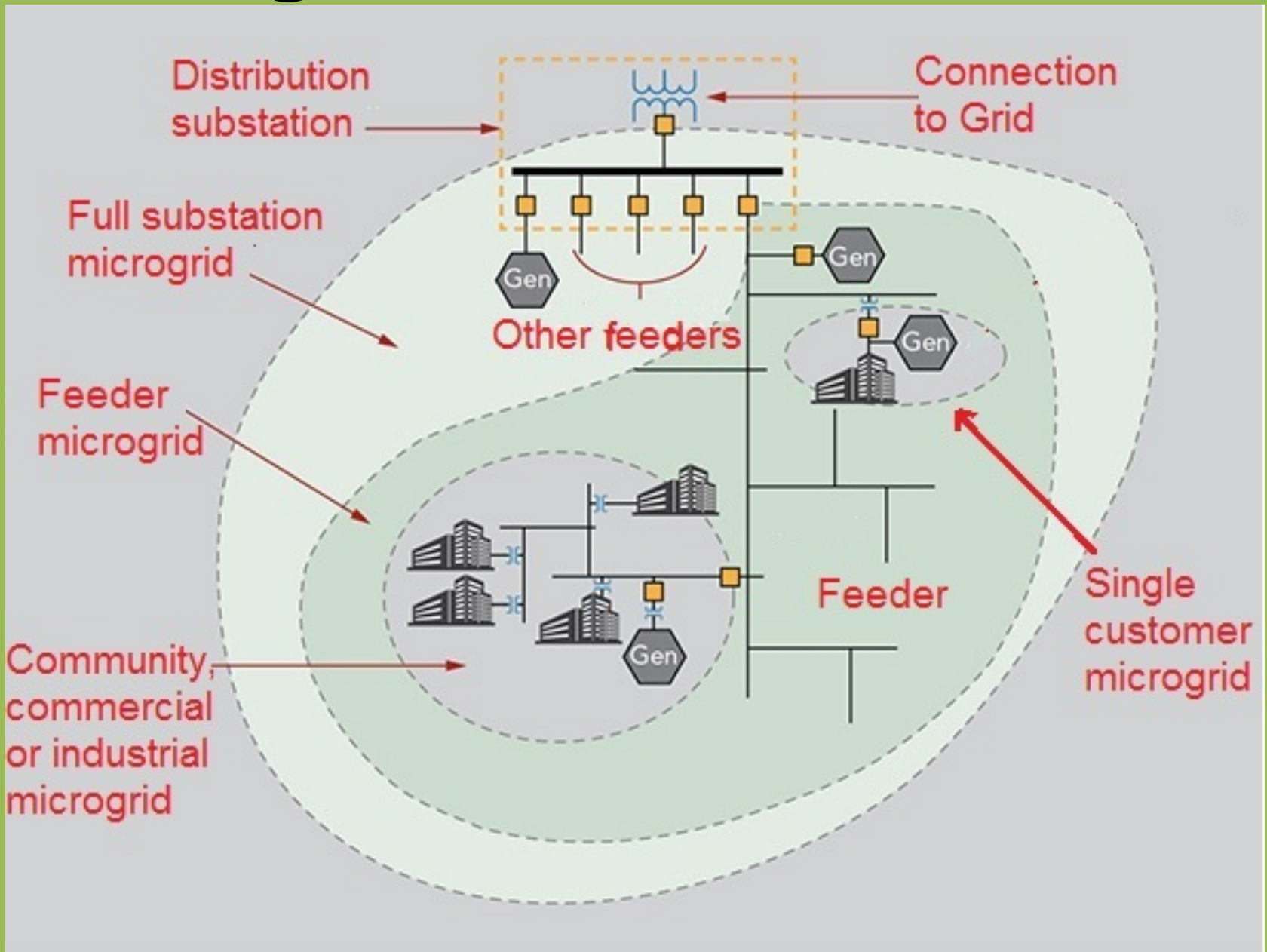
For Bipole III Coalition

(Re: Brief Dated 18 May 2015)

2nd June, 2015

Microgrids

[Bipole III Coalition]



Grid Parity

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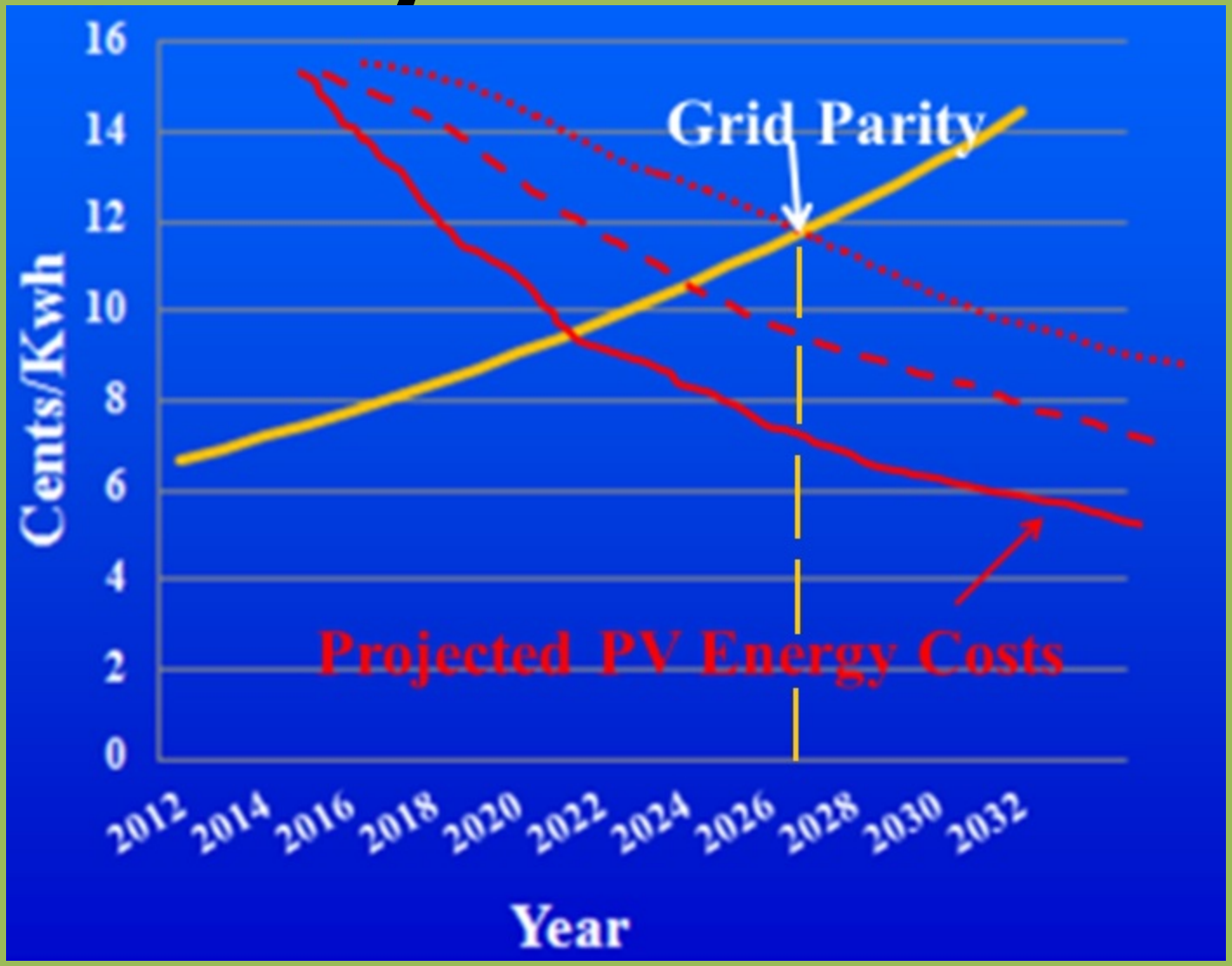

Retraction: The presentation to Alberta is hearsay

But what is not hearsay: Bipole III Coalition

Consider Manitoba Hydro's Load Forecast pages ii, 50, 55

Manitoba Hydro did consider solar energy when grid parity is reached

Courtesy of Solar Solutions Inc.

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So What Did Manitoba Hydro Do in the Load Forecast for Grid Parity with Solar Panels being added when Average Load Growth is 70 MW?

Nothing – It Was Excluded (p58)

But Plug-in Vehicles were reasonably added

Consider 2014 % annual solar MW growth in US States that have reached parity:

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Hawaii = 27% pa

California = 35% pa

Note: Production Tax Credit in place

Source: Solar Energy Industries Assn

c/f Manitoba = 1.3% pa (≈70 MW)

Courtesy RTDS Technologies

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Growth in Microgrids From 4,393 MW 2nd quarter 2014 to over 12,000 MW 2nd quarter 2015

Source: Electric Light & Power/Power Grid International 05/18/2015
http://www.elp.com/articles/2015/05/microgrid-capacity-tripled-last-year.html?cmpid=Enl_ELP_May-19-2015&eid=288964602&bid=1075900

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Growth in Solar Farms

A new $250 million solar project in Minnesota by Geronimo Energy for Sale to Xcel Energy for summer peaks

Source: Electric Light & Power/Power Grid International 05/29/2015

http://www.elp.com/articles/2015/05/solar-power-project-gets-ok-from-minnesota-regulators.html

Competition for Minnesota summer market

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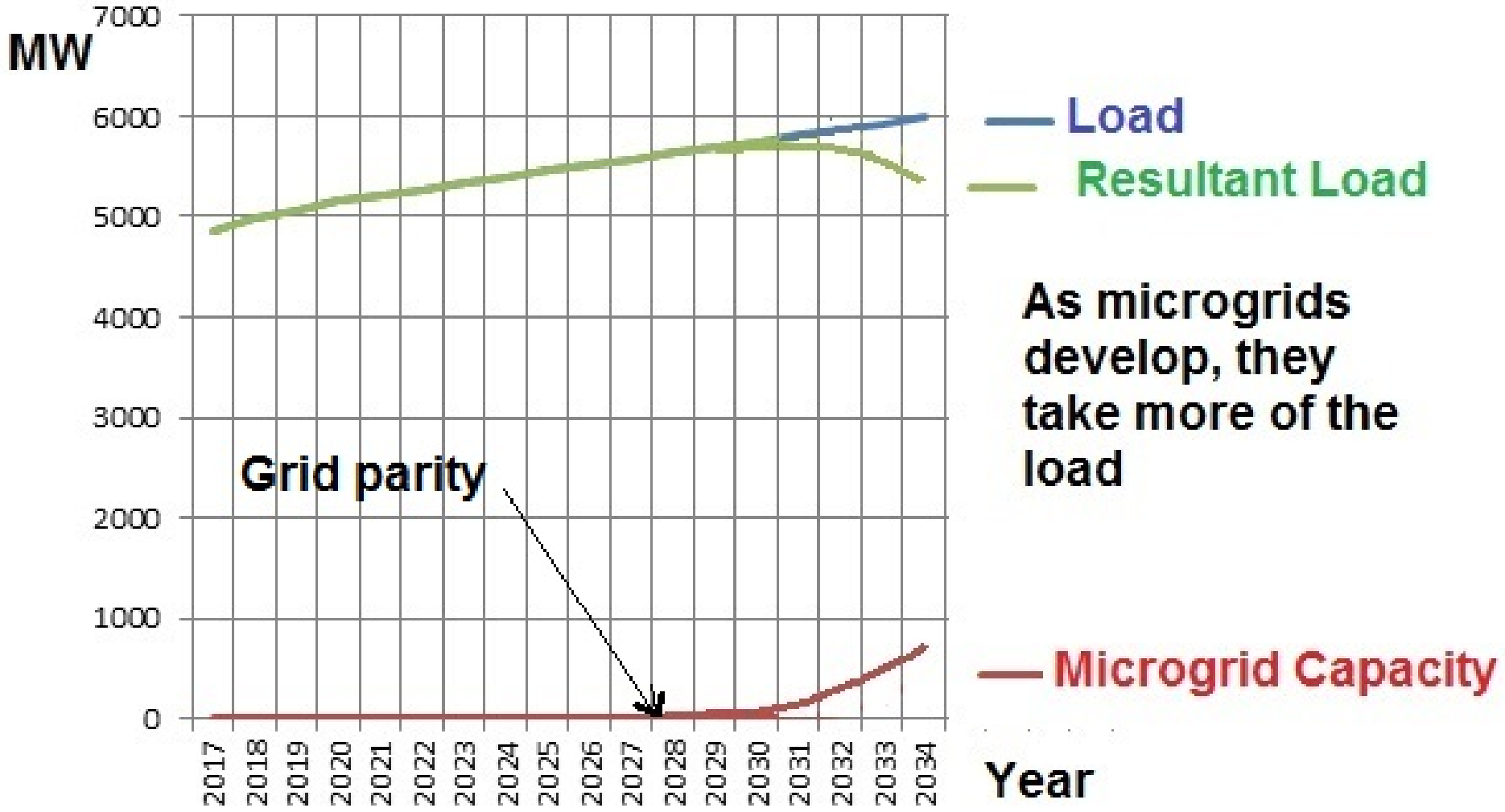
Possible Impact of Microgrids & Solar



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Possible Impact of Microgrids

No Conawapa

Significant lifting of stress on rates

Bipole III – No O/H Line

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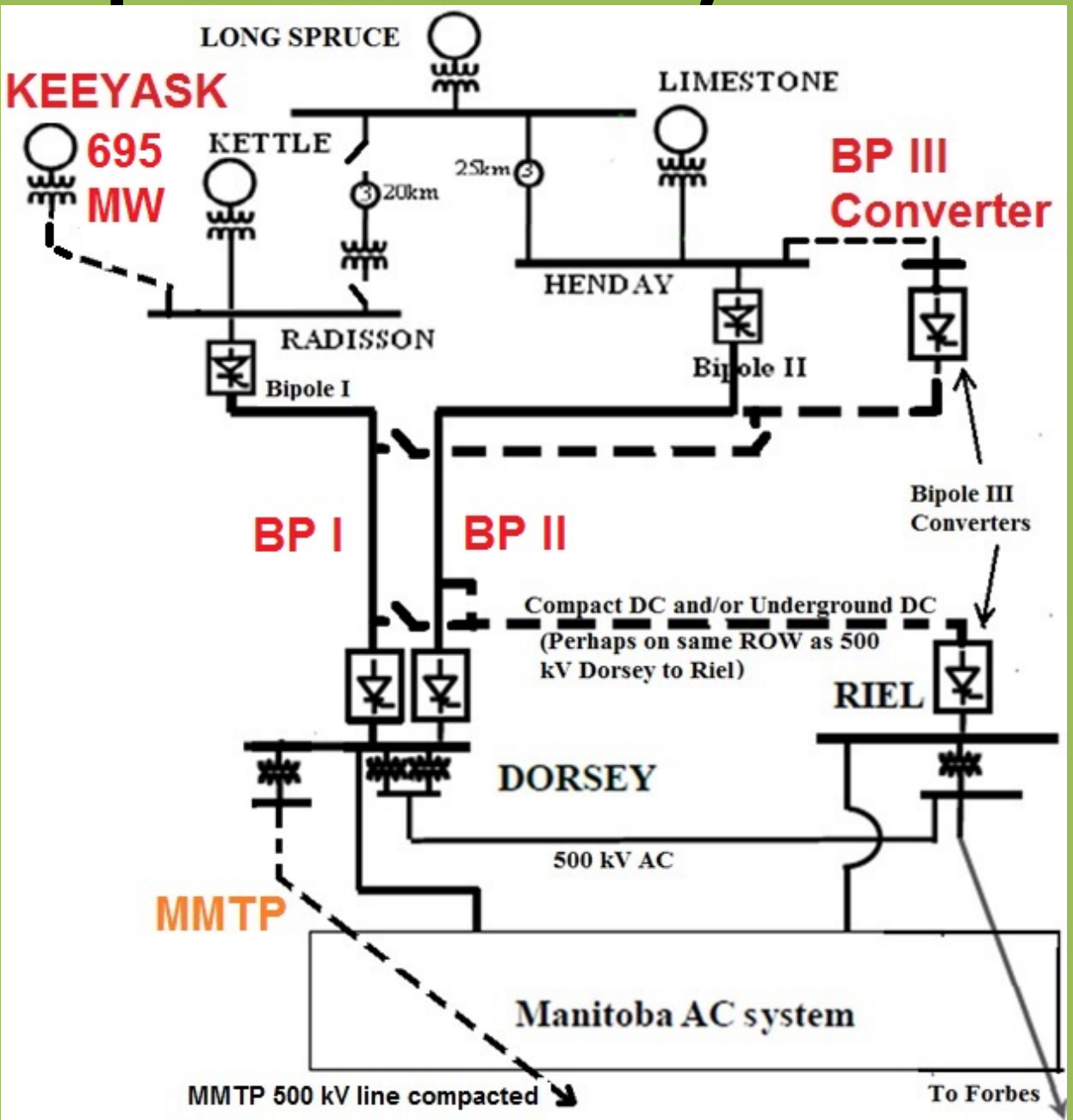

Connect BP III converter to the existing BP I or BP II overhead transmission lines – each rated at 3800 MW and used at 2000 MW – can easily carry extra 695 MW

Bipole III – No O/H Line

Bipole III Coalition

Advantages:

1. **If line construction stopped immediately, may leave $1 billion unspent and if BP III converters can be re-contracted to 1200 MW– lower rate increase requirement**

2. **Eliminate stress to First Nations, Landowners and the Wilderness**

3. **Can still refurbish Bipole II converters**

Bipole III – No O/H Line

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Disadvantages:

1. **Manitoba Hydro won't budge on their stance for Bipole III and their justification depends on a questionable need for "reliability"**

2. **Extra losses, but annual cost of those extra losses much less than the annual carrying charge on $1 billion**

Bipole III – "Reliability"

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A list of questionable issues regarding Bipole III needed for reliability:

1. **For the CEC hearings on Bipole III, no NFAT for Bipole III was allowed and hence no debate on "reliability"**

2. **For the PUB NFAT for Manitoba Hydro's PDF, Bipole III was declared Out of Scope by Order in Council April 17, 2013 thus no debate on "reliability"**

Bipole III – "Reliability"

Bipole III Coalition

A list of questionable issues regarding Bipole III needed for reliability cont.

3. **Manitoba Hydro submitted to the PUB of Newfoundland and Labrador that a reliability study for the Muskrat Falls Project should be done, but never tabled one for the reliability of Bipole III specifically**

Bipole III – "Reliability"

Bipole III Coalition

A list of questionable issues regarding Bipole III needed for reliability cont.

4. **In Manitoba Hydro's submission to the PUB NFAT on its PDP, Appendix 13.1, an NFAT Reliability Evaluation was undertaken to compare the reliability of alternatives, unacceptable input data was used, invalidating the evaluation**

Bipole III – "Reliability"

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A list of questionable issues regarding Bipole III needed for reliability cont.

4.1 Manitoba Hydro insisted through the CEC EIS and hearings and the PUB NFAT that the simultaneous failure of the Bipoles I and II transmission lines would occur once every 17 years. A detailed weather hazard report they received Jan 2012 said that figure is once every 90 years – big difference and they kept quiet about it and continued to use the 17 years in their NFAT studies and as a scare tactic.

Bipole III – "Reliability"

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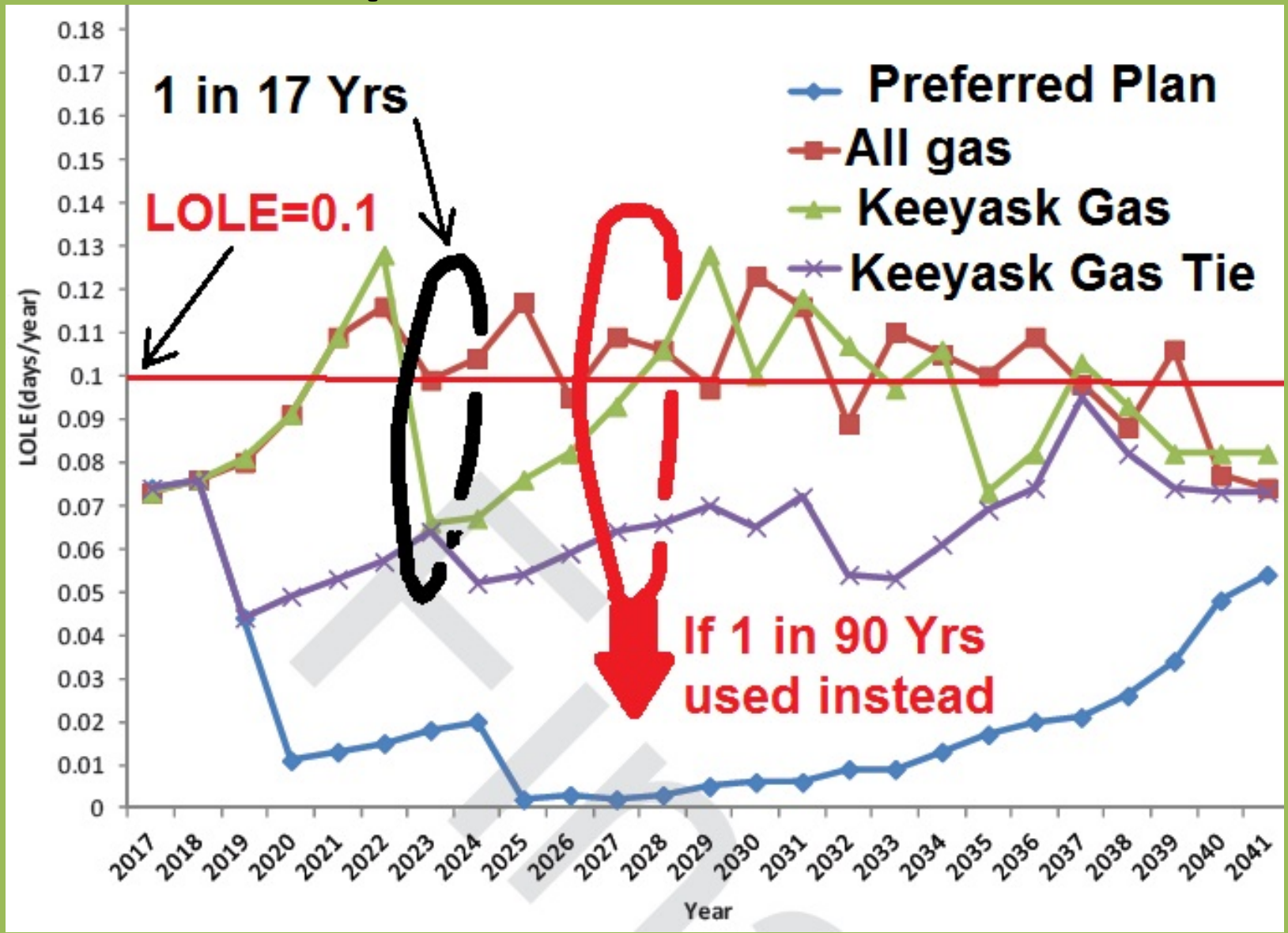
Loss of Load Expectation for PDP NFAT



Bipole III – "Reliability"

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Can Manitoba Hydro justify the continued use of the 1 in 17 years for simultaneous loss of the Bipoles I and II transmission lines when the Teshmont Jan 2012 weather hazard report clearly indicates 1 in 90 years?

Is this misrepresentation deliberate to justify the need for Bipole III for "reliability" so its cost of $4.65 billion could be sunk into the rate base and not added to electricity export costs? We leave this for you to contemplate

The Bipole III Coalition requests the PUB require Manitoba Hydro to submit a detailed plan of how the emerging reality of supply of electric is to be undertaken as affected by the inevitable transition to microgrids. We ask that such a submission state the impact of microgrids on electricity rates paid by Manitobans

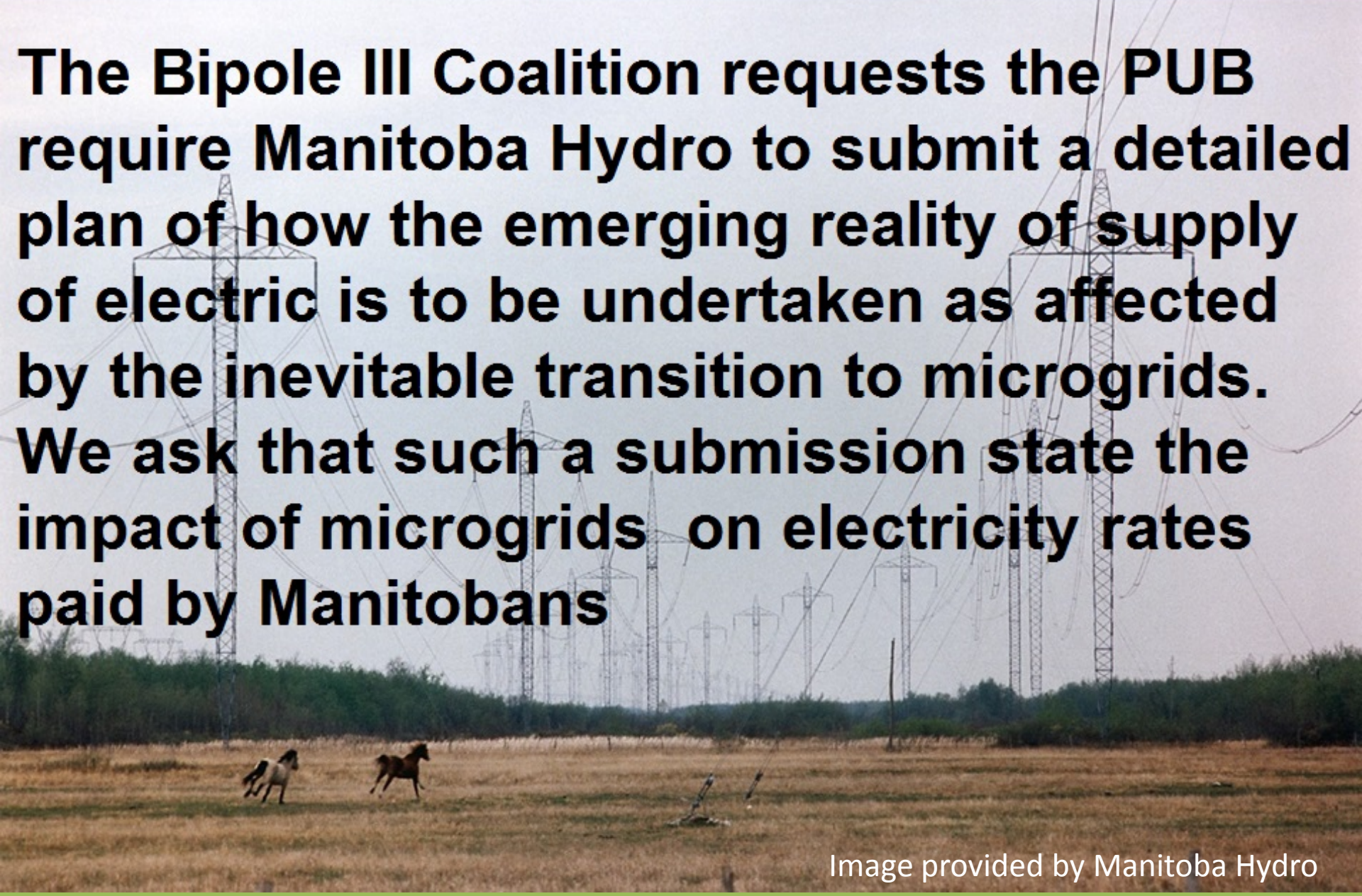

Image provided by Manitoba Hydro

Thank You