

# **Power Smart for Hard Rock Mining**

## **Minerals North, Stewart BC**

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**April 28, 2011**

# Agenda



1. Who We Are

2. The Gap & Power Smart for Mining

3. Power Smart Partners Industrial Program

# Who We Are

## BC Hydro Business Overview



### WE MAKE ELECTRICITY

- 90% Hydro – 10,259 MW
- 10% Thermal – 1,041 MW



### WE MOVE ELECTRICITY

- 18,000 km of transmission lines
- 57,000 km of distribution lines



### WE BUY ELECTRICITY

- Independent Power Producers
- Electricity markets
- Customers

# Who We Are

## BC Hydro Business Overview

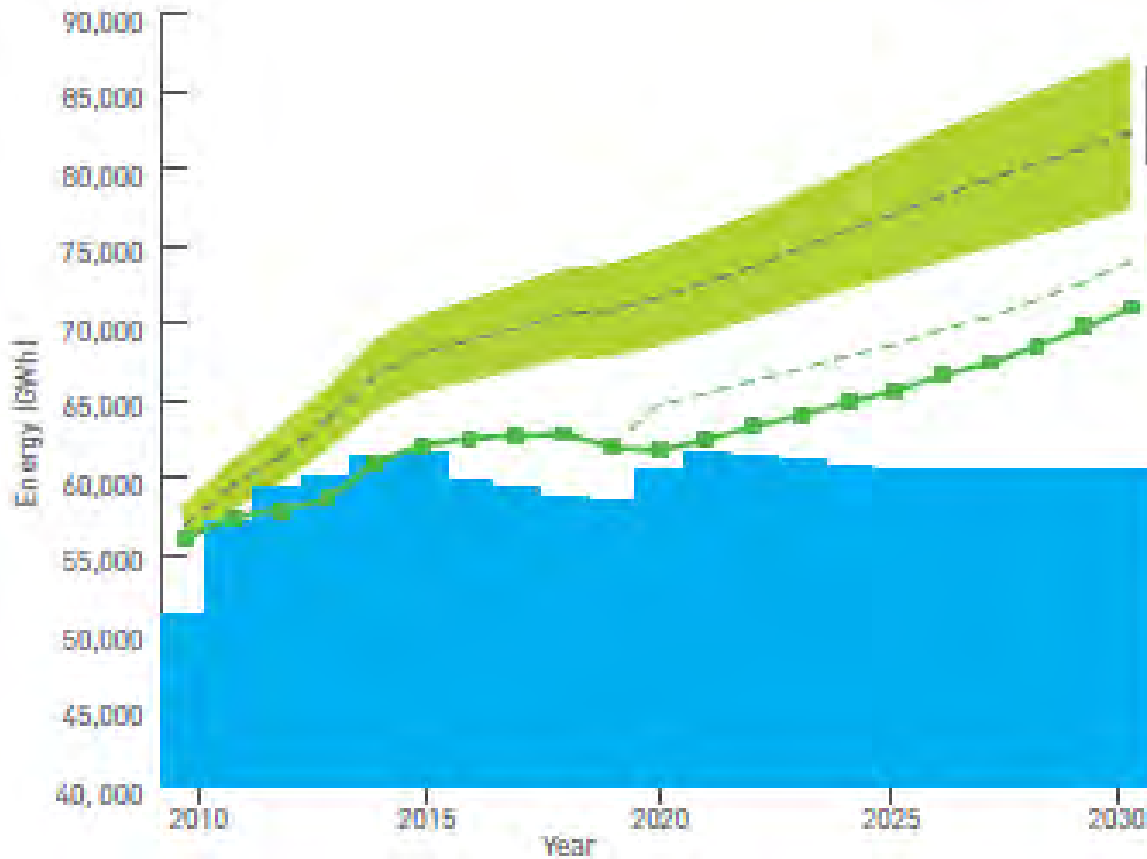


### WE SELL ELECTRICITY

- Residential
- Commercial
- Industrial
- Market/Trade

Domestic Energy Sales	\$M	%	GWh	%	\$/MWh
Residential	1,046	39	16,261	31	64
Light industrial & commercial	989	36	17,913	34	55
Large Industrial	584	22	16,428	31	36
Other energy Sales	91	3	1,838	4	50
<b>Total</b>	<b>2,710</b>		<b>52,440</b>		<b>51</b>

# BC Hydro's Electricity Demand



**CONSERVE MORE**  
By helping customers be more efficient and use power wisely, we can reduce the need to build new generation capability.

**BUY MORE**  
BC Hydro will continue to purchase power from independent power producers (IPPs) that use clean or renewable resources.

**BUILD AND MAINTAIN MORE**  
BC Hydro's aging infrastructure requires reinvestment to operate safely and reliably. We will also examine the potential of new hydro generation facilities.

**LEGEND**

- Draft 2010 load forecast range
- Total BC Hydro supply reflecting Clean Energy Act
- Mid forecast of customer demand
- 3,000 GWh per year of energy insurance requirement reflecting Clean Energy Act
- Mid forecast after DSM

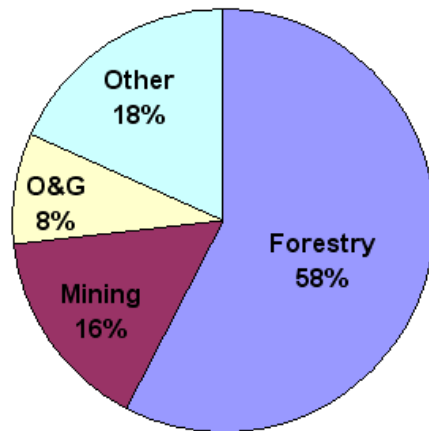
# Industrial Growth Comparison – F2011 to F2016



## Industrial Sector F2011

2,900 MVA

(includes O&G LNG/pipelines)

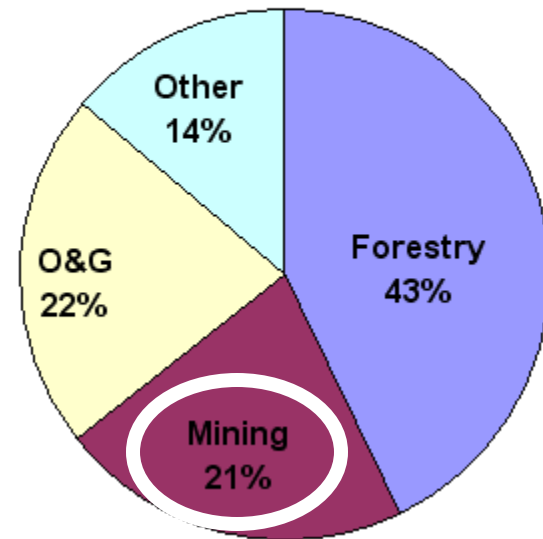


47% increase  
in 5 years

## Industrial Sector F2016

4,200 MVA (47% increase in 5 years)

(with new LNG expectations of 400 MVA)

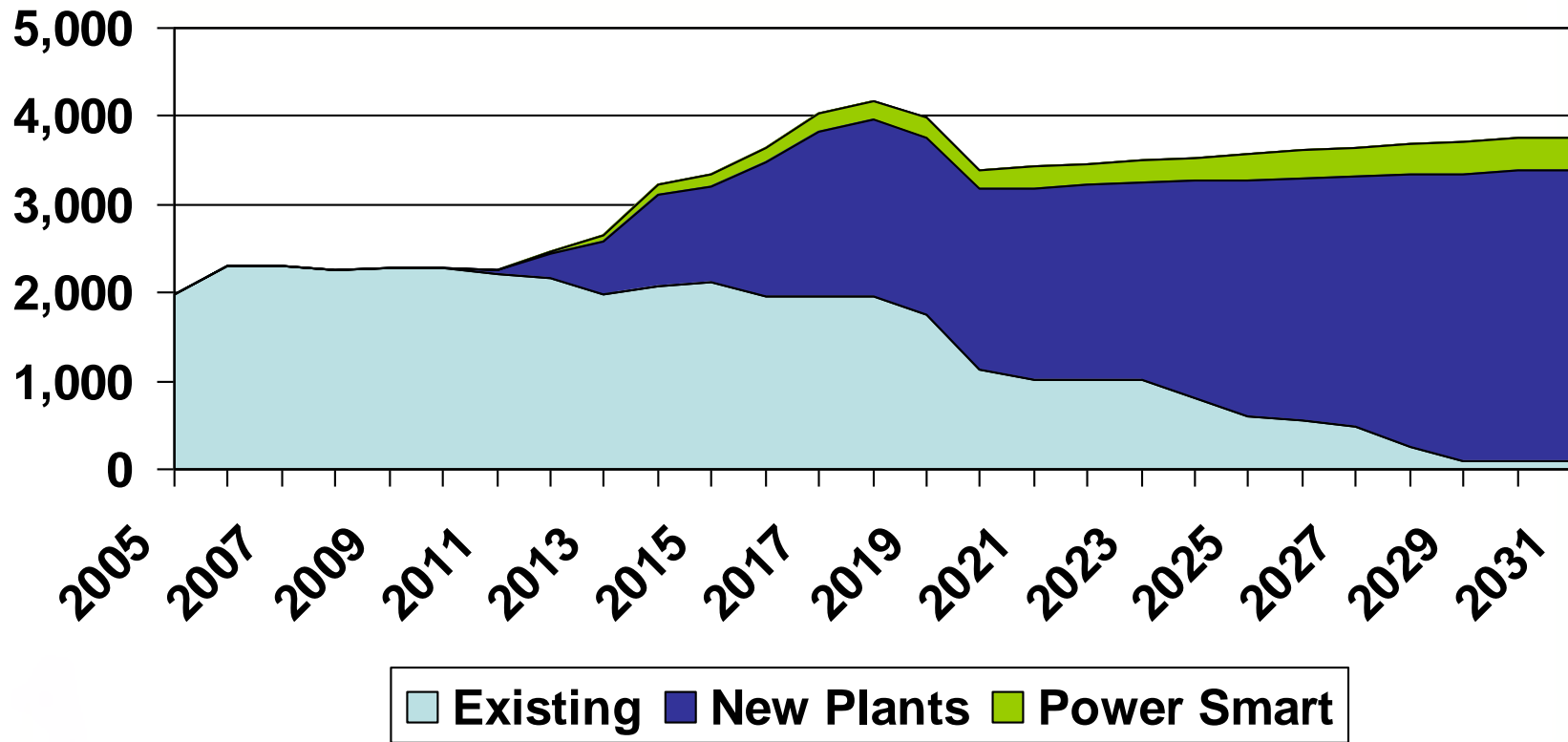


Growth from O&G and Mining

# Load Growth Forecast – Metal Mines (with Power Smart Savings Potential)



GWh/yr



# Conservation Potential for Existing BC Metal Mines (GWh/yr)



Source: 2007 Conservation Potential Review , Marbek and Willis, November 2007

Process/end-use	Annual Energy consumption	Conservation Economic Potential (CEP) / year	Achievable Potential (AP)
<b>Compressed Air</b>	21.7	7.4	<b>2.1</b>
<b>Lighting</b>	12.3	7.0	<b>5.3</b>
Pit	87.0	9.0	2.4
Conveyors	71.0	10.0	3.0
Crushing	9.3	1.0	0.2
Grinding	1,357.0	<b>210.0</b>	<b>29.4</b>
Flotation	154.0	<b>75.3</b>	<b>20.3</b>
Slurry pumps	121.8	<b>13.1</b>	<b>7.9</b>
Tailings	119.0	<b>20.0</b>	<b>4.4</b>
Fresh water	300.0	<b>53.6</b>	<b>9.4</b>
<b>Total</b>	<b>2,253.0</b>	<b>406.0</b>	<b>84.3</b>

Source: Conservation Potential and Opportunities in BC (Metal) Mining Industry, C.Pitis, BC Hydro Power Smart, November, 2009



# Managing Energy is a Smart Business Practice



## PRODUCTIVITY

An efficient system is a high-performance system. That means better quality products & improved customer satisfaction.

## PROFITABILITY

Saving energy will save you money today & with smart energy management, your savings will continue to grow year after year - giving you a sustainable competitive advantage.

## REPUTATION

Get recognized in your industry & your community for economic & energy leadership. Your reputation for being smart with energy will add value to your products, attracting new customers.

# Power Smart Partners Industrial Program



# Questions?

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