



ALBERTA POWER MARKET



## ALBERTA POWER MARKETS

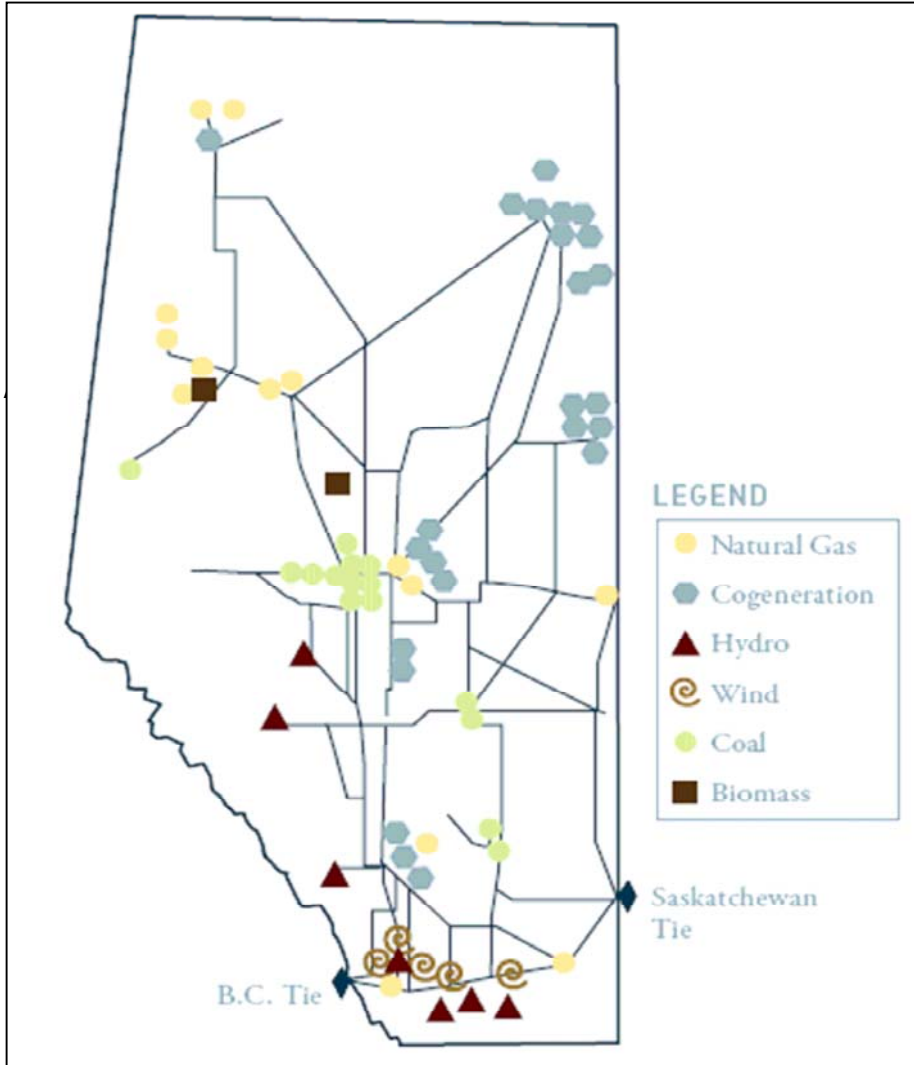
### Generating Capacity

<b>Generating Capacity [MW]</b>	
Coal	5,840
Gas	4,434
Hydro	900
Wind	522
Biomass	184
Fuel Oil	13
<b>Subtotal</b>	<b>11,892</b>
<b>Interconnections</b>	
British Columbia	750
Saskatchewan	150
<b>MARKET</b>	<b>900</b>
<b>Grand Total</b>	<b>12,792</b>

Source: Alberta Government, Energy and Utilities Board (EUB), Alberta Electric System Operator (AESO) and industry information

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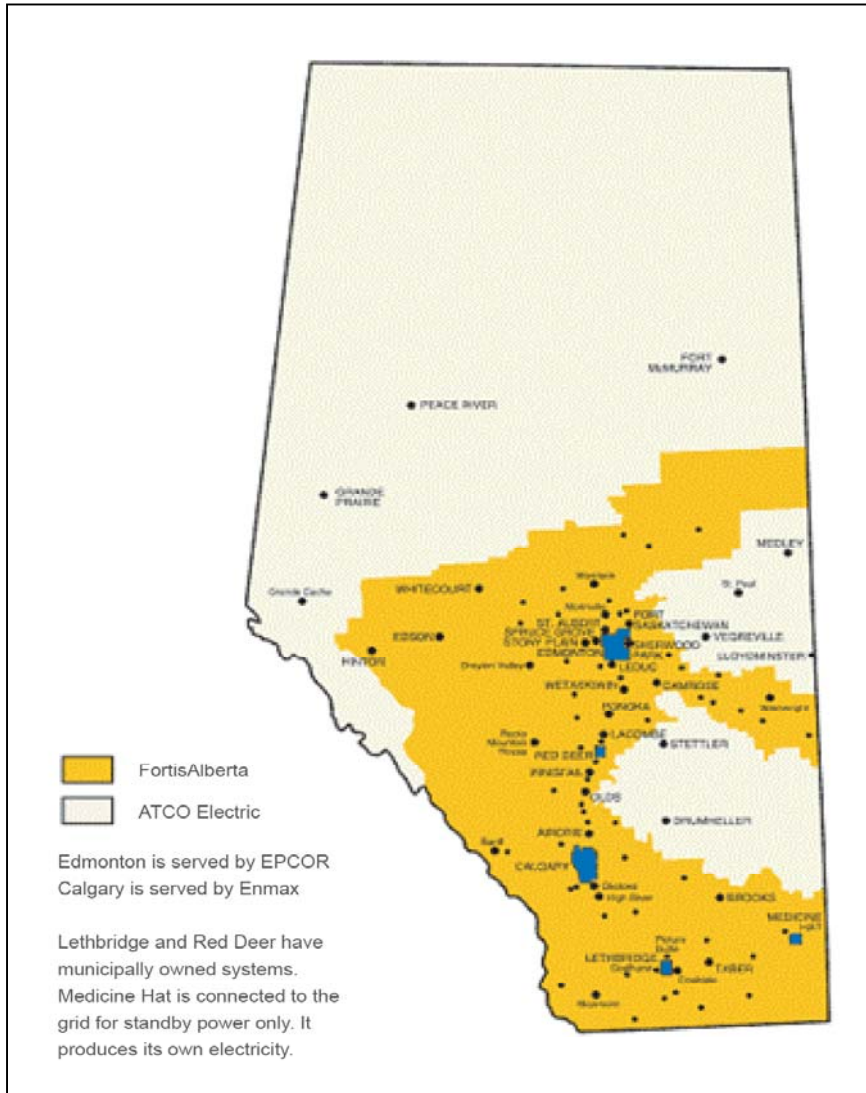
## Alberta Generation and Transmission System



Source: Alberta Energy Overview, Alberta Government

# ALBERTA POWER MARKETS

## Electric Utility Service Areas



Source: Alberta Energy and Utilities Board

## ALBERTA POWER MARKETS

## Fundamental Facts

	2002	2003	2004	2005	2006	Q1 2007
Peak demand (MW) <sup>6</sup>	85,707	8,967	9,236	9,580	9,961*	9,478
Max. (peak) Pool price (\$/MWh)	999	999.99	998.01	999.99	999.99	717.89
Average Pool Price (\$/MWh)	43.93	62.99	54.66	70.36	80.79	63.29
Min. (non-peak) Pool price (\$/MWh)	0.01	7.07	0	4.66	5.42	6.26
Total energy traded (MWh)	118,845,008	125,425,554	130,520,430	132,533,484	138,742,950	35,552,228
Number of Power Pool participants	227	231	244	222	222	210

\*November 28,2006

Source: Alberta Government

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**Electricity Imports & Exports**

	2002	2003	2004	2005	2006	Q1 2007
Exports volume (MWh)	574,769	1,227,698	1,061,083	1,038,074	489,465	318,374
Exports value (\$ million)	\$9.8 M	\$50.9 M	\$36.3 M	\$37.9 M	\$19.4 M	\$15.4 M
Imports volume (MWh)	1,160,675	1,332,193	1,491,661	1,534,574	1,517,027	307,523
Imports value (\$ million)	\$78.7 M	\$120.4 M	\$111.2 M	\$164.5 M	\$193.3 M	\$22.2 M

Source: AESO data

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## Customer Usage Estimates

	2006 Number of Customers	2002 Usage(GWh)	2003 Usage(GWh)	2004 Usage(GWh)	2005 Usage(GWh)	2006 Usage(GWh)
Residential	1,191,538	7,226.30	7,581.00	7,580.50	7,769.10	8,253.50
Farm	78,754	1,702.50	1,776.10	1,734.60	1,705.10	1,768.50
Commercial	141,687	11,190.10	11,117.80	11,689.60	12,080.50	12,733.20
Industrial	35,532	28,738.00	27,869.70	28,530.60	29,054.60	29,225.00
<b>Total</b>	<b>1,447,511</b>	<b>48,449.20</b>	<b>48,344.60</b>	<b>49,535.30</b>	<b>50,609.30</b>	<b>51,980.20</b>

Source: EUB

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## Generation Additions 1998-2007

Developer	Location	Installed Capacity (MW)	Type	Year On-line
CNRL & ATCO Power	Primrose	85	Cogeneration	1998
Alberta Pacific Forest Ind.	Boyle	82	Biomass	1999
Altec Power	Willesden Green	1	Flare Gas	1999
ATCO Power	Poplar Hill	47	Gas Turbine	1999
ATCO Power	Rainbow Lake 4	45	Cogeneration	1999
BC Hydro	Fort Nelson	45	Gas Turbine	1999
BP Canada Energy	Various	10	Natural Gas	1999
Dow / TransAlta	Fort Saskatchewan	120	Cogeneration	1999
Drayton Valley Power	Dapp	17	Biomass	1999
Maxim Energy Corp.	Gold Creek	7	Waste Heat	1999
ALBERTA POWER	Fort McMurray	80	Cogeneration	1999
Air Liquide	Scotford	80	Cogeneration	2000
ATCO / NOVA / EPCOR	Joffre	416	Cogeneration	2000
Canadian Hydro Developers	Cowley Ridge Exp.	2	Wind	2000
Canadian Hydro Developers	Drywood	6	Natural Gas	2000
Canadian Hydro Developers	Taylor Chute Hydro	14	Hydro	2000
Devon Canada Corp.	Devon	12	Natural Gas	2000
Mercury Electric Corp.	Alberta	3	Natural Gas	2000
TransCanada	Medicine Hat	27	Cogeneration	2000
Vision Quest (TransAlta)	Castle River Exp.	39	Wind	2000
Vision Quest (TransAlta)	Waterton area	3	Wind	2000
ATCO Power	Rainbow Lake 5	45	Cogeneration	2001
Canadian Hydro Developers	Cowley North	20	Wind	2001



Canadian Hydro Developers	Sinnott	7	Wind	2001
EnCana	Cavalier	120	Cogeneration	2001
EnCana/Nexen	Balzac	106	Cogeneration	2001
EPCOR/ Peigan First Nation	Pincher Creek	1	Wind	2001
Lundbreck Developments	Lundbreck	1	Wind	2001
Maxim Energy Corp.	APP-Burdette	7	Natural Gas	2001
Maxim Energy Corp.	APP-Coaldale	6	Natural Gas	2001
Maxim Energy Corp.	APP-Fort MacLeod	4	Natural Gas	2001
Maxim Energy Corp.	APP-Taber	8	Natural Gas	2001
Maxim Energy Corp.	Gift Lake	1	Waste Heat	2001
Penn West	Buck Lake	6	Cogeneration	2001
TransAlta	Poplar Creek	360	Cogeneration	2001
TransCanada	Carseland	80	Cogeneration	2001
TransCanada	Medicine Hat/Cancarb	11	Cogeneration	2001
TransCanada	Redwater	40	Cogeneration	2001
ATCO Power	Albian Muskeg River	170	Cogeneration	2002
ATCO Power	Valleyview	45	Natural Gas	2002
Imperial Oil	Cold Lake	169	Cogeneration	2002
Maxim Energy Corp.	EVI	3	Natural Gas	2002
Northstone Power Corp.	Elmworth Area	12	Natural Gas	2002
Permolex	Red Deer	4	Cogeneration	2002
TransAlta	Sundance #6 exp.	35	Coal	2002
TransCanada	Bear Creek	80	Co-gen & Biomass	2002
ATCO Power	Albian Muskeg River (ph. 2)	30	Cogeneration	2003
Vision Quest (TransAlta)	McBride Lake East	1	Wind	2003
ATCO Power	Oldman River 1, 2	32	Hydro	2003
ATCO Power	Scotford	179	Cogeneration	2003
Calpine	Calgary	300	Natural Gas	2003
EnCana	Foster Creek	80	Cogeneration	2003

SAIT	Calgary	3	Cogeneration	2003
TransCanada	McKay River	165	Cogeneration	2003
Vision Quest (TransAlta)	McBride Lake	75	Wind	2003
ATCO Power	Scotford	2	Cogeneration	2004
Irrican	St. Mary River	7	Hydro	2004
Suncor / Enbridge / EHN	Magrath	30	Wind	2004
Vision Quest (TransAlta)	Summerview	68	Wind	2004
Canadian Hydro Developers	Grande Prairie	25	Biomass	2005
EnCana / Nexen	Balzac	9	Cogeneration	2005
EPCOR	Genesee 3	450	Coal	2005
EPCOR	Clover Bar	5	Biogas	2005
Talisman	Edson	12	Cogeneration	2005
Highmark Renewables	Vegreville	1	Biogas	2005
Canadian Hydro Developers	Taylor	3	Wind	2006
GW Power/ Nexen	Soderglen	68	Wind	2006
Kettle Hills Wind Energy	Pincher Creek	9	Wind	2005
Syncrude Canada	Aurora	80	Cogeneration	2006
Suncor	Chin Chute	30	Wind	2006
City of Medicine Hat	Medicine Hat	10	Gas	2007
Suncor	Fire Bag	80	Cogeneration	2007
Enmax Purple Springs	Taber	81	Wind	2007
Kettle Hills Wind Energy	Pincher Creek	54	Wind	2007
Syncrude Mildred Lake	Aurora	80	Cogeneration	2007
<b>Total New Generation On line (1998-2007)</b>		<b>4,451</b>		

Source: Alberta Government Energy Department, Estimate based on EUB and AESO and industry information, 2007.

## ALBERTA POWER MARKETS

## Proposed Generations

Developer	Location	Proposed Capacity (MW)	Type	Status
AltaGas	Southern Alberta	14	Gas	2007
Alberta Wind Energy	Pincher Creek	50	Wind	2007
Prairie Home Wind Energy	County of Warner	12	Wind	2007
Vision Quest Blue Trail	Macleod Flats	66	Wind	3Q 2007+
Shell Canada	Caroline	20	Cogeneration	4Q 2007
TransAlta	SD 4 Upgrades	45	Coal	4Q 2007
EPCOR	Clover Bar	45	Gas	2007
Canadian Hydro Developers	Cyr's Ridge	18	Wind	2007+
Canadian Hydro Developers	Sennet	35	Wind	2007+
Canadian Hydro Developers	St Henry	72	Wind	2007+
ALBERTA POWER	Fort McMurray	101	Cogeneration	2007+
CNRL	Primrose East	85	Cogeneration	2007+
ECB Enviro North America	Lethbridge	3	Biomass	2007+
EnCana	Medicine Hat	85	Cogeneration	2007+
Montant Alberta Tie Line	Lethbridge	300	Interconnection	2007+
OPTI/Nexen	Fort McMurray	170	Bitumen	2007+
Sundance Forest Industries	Edson	10	Biomass	2007+
TransAlta	Keephills Upgrades	30	Coal	2007+
TransAlta	Sundance Upgrades	160	Coal	2007+
Wind Power Castle Rock	Pincher Creek	112	Wind	2007+
Wind Power Prairie	Pincher Creek	115	Wind	2007+
Greenwind Power Yagos	Pincher Creek	100	Wind	2008+
Enviro N. America	Lethbridge	3.2	Bio-Mass (co-gen)	2008

EPCOR	Clover Bar	100	Gas	2008
Greenwind Power Riverside	Pincher Creek	100	Wind	2008
Greenwind Power Hucik	Pincher Creek	140	Wind	2008+
Greenwind Power Zoratti	Pincher Creek	100	Wind	2008+
Kettles Hill Heritage	Pincher Creek	70	Wind	2008+
TransAlta Seven Persons	Medicine Hat	120	Wind	2008+
Vision Quest	Summerview	63	Wind	2008+
CNRL	Fort McMurray	85	Cogeneration	2009+
West WindEau	Cypress Hills	200	Wind	2009+
MEG Energy Corp.	Christina Lake	85	Cogeneration	2009+
Shell Canada	Carmon Creek	185	Cogeneration	2009+
Suncor Stage 3	Fort McMurray	170	Cogeneration	2009+
Vision Quest	Waterton	150	Wind	2009+
West WindEau	Cypress Hills	200	Wind	2009+
Wind Power Castle Rock #2	Pincher Creek	350	Wind	2009+
Windrise Power	Soderglen	99	Wind	2009+
Deer Creek Energy	Fort McMurray	85	Cogeneration	2010+
EPCOR	Clover Bar	100	Gas	2010+
ENMAX	Calgary	50	Cogeneration	2010+
ENMAX	Southern Alberta	1200	Gas	2010+
Imperial Kearn Phase 1	Fort McMurray	85	Cogeneration	2010+
Luscar	Brooks area	450	Coal	2010+
CNRL	Primrose East	85	Cogeneration	2010+
Shell Canada	Jackpine	170	Cogeneration	2010+
Vision Quest	Waterton	150	Wind	2010+
Canadian Hydro Developers	Dunvegan	100	Hydro	2011+
Petro-Canada/UTS	Fort McMurray	85	Cogeneration	2011+
TransAlta/EPCOR	Keephills #3	450	Coal	2011+
Petro-Canada	Mackay River	190	Cogeneration	2013+

TransAlta/ SD3 Upgrades	Wabamun	40	Coal	2013+
CNRL Horizon Phase 3	Fort McMurray	85	Gas	2014+
Deer Cr. Joslyn Plant N.	Fort McMurray	85	Gas	2014+
Imperial Oil Kearl Phase 2	Fort McMurray	85	Gas	2014+
Petro-Canada	Meadow Creek	170	Cogeneration	2016+
<b>Total Proposed Generation</b>		<b>7,189</b>		

\*U/C denotes "Under Construction"

Source: Alberta Government, EUB Information