Electricity is generated from various fuel sources, including coal, gas, wind and hydro.

Generators
In Alberta, generation facilities are owned by private investors or municipalities. This means that private investors bear the risk of investing and building, operating and maintaining these facilities and Albertans do not bear this risk. This is why Alberta carries $0 utility debt.

Electricity System Overview

Generation
- Competitive/market based
- Private investment
- Energy only market design

Transmission
- Fully regulated
- Cost-of-Service Model
- One rate for Albertans

Distribution
- Fully regulated
- Supports retail competition

Retail/Customer
- Partially deregulated
- Competitive Contracts
- Regulated rate option for small consumers

Canadian Electric Utilities Debt
(Figures are in Canadian billions of dollars)

Source: London Economics 2014
## Demand

Over the next 10 years, it is expected that demand for electricity in Alberta will increase.

- Alberta is the fastest growing province in the country – and that means that we need to generate more electricity to power our province.
- In 2013, Alberta’s generation capacity was 14,598 megawatts (MW). The Alberta Electric System Operator forecasts that peak demand will increase to more than 18,000 MW by 2032.

### Electricity Generation

<table>
<thead>
<tr>
<th>1996</th>
<th>2013</th>
<th>2034</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Generation</strong></td>
<td><strong>Generation</strong></td>
<td><strong>Generation</strong></td>
</tr>
<tr>
<td>Coal (66%)</td>
<td>Coal (43%)</td>
<td>Coal (10%)</td>
</tr>
<tr>
<td>Natural Gas (20.8%)</td>
<td>Natural Gas (40%)</td>
<td>Natural Gas (74%)</td>
</tr>
<tr>
<td>Hydro (10%)</td>
<td>Hydro (6%)</td>
<td>Hydro (4%)</td>
</tr>
<tr>
<td>Wind (0.2%)</td>
<td>Wind (8%)</td>
<td>Wind (11%)</td>
</tr>
<tr>
<td>Biomass and other (3%)</td>
<td>Biomass and other (3%)</td>
<td>Biomass and other (3%)</td>
</tr>
<tr>
<td><strong>Total Capacity = 8,628 MW</strong></td>
<td><strong>Total Capacity = 14,598 MW</strong></td>
<td><strong>Total Capacity ~ 24,953 MW</strong></td>
</tr>
</tbody>
</table>

### People

<table>
<thead>
<tr>
<th>1996</th>
<th>2013</th>
<th>2034</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Population = 2.8 Million</strong></td>
<td><strong>Population = 4.1 Million</strong></td>
<td><strong>Population = ~ 5.6 Million</strong></td>
</tr>
</tbody>
</table>

### Economy

<table>
<thead>
<tr>
<th>1996</th>
<th>2013</th>
<th>2034</th>
</tr>
</thead>
</table>

### Demand

<table>
<thead>
<tr>
<th>1996</th>
<th>2013</th>
<th>2034</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Peak Demand = 7,056 MW</strong></td>
<td><strong>Peak Demand = 11,139 MW</strong></td>
<td><strong>Peak Demand ~ 18,519 MW</strong></td>
</tr>
</tbody>
</table>

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2. Alberta Utilities Commission, Installed Capacity 2013
3. Alberta Electric System Operator 2012 Long Term Outlook
5. Conference Board of Canada
7. Alberta Electric System Operator 2014 Long Term Outlook

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### Alberta Electric System Operator (AESO)

The AESO is responsible for the day to day operation of Alberta’s electricity grid. They ensure the minute-to-minute electricity demands in the province are met in a safe and reliable manner. [www.aeso.ca](http://www.aeso.ca)

### Market Surveillance Administrator (MSA)

The Market Surveillance Administrator (MSA) is the market watchdog that monitors the market and checks that participants are operating in a fair, efficient and openly competitive manner. More serious transgressions are prosecuted by the MSA before the Alberta Utilities Commission (AUC). [www.albertamsa.ca](http://www.albertamsa.ca)