

# ELECTRICITY

## IN ALBERTA AND THE AESO



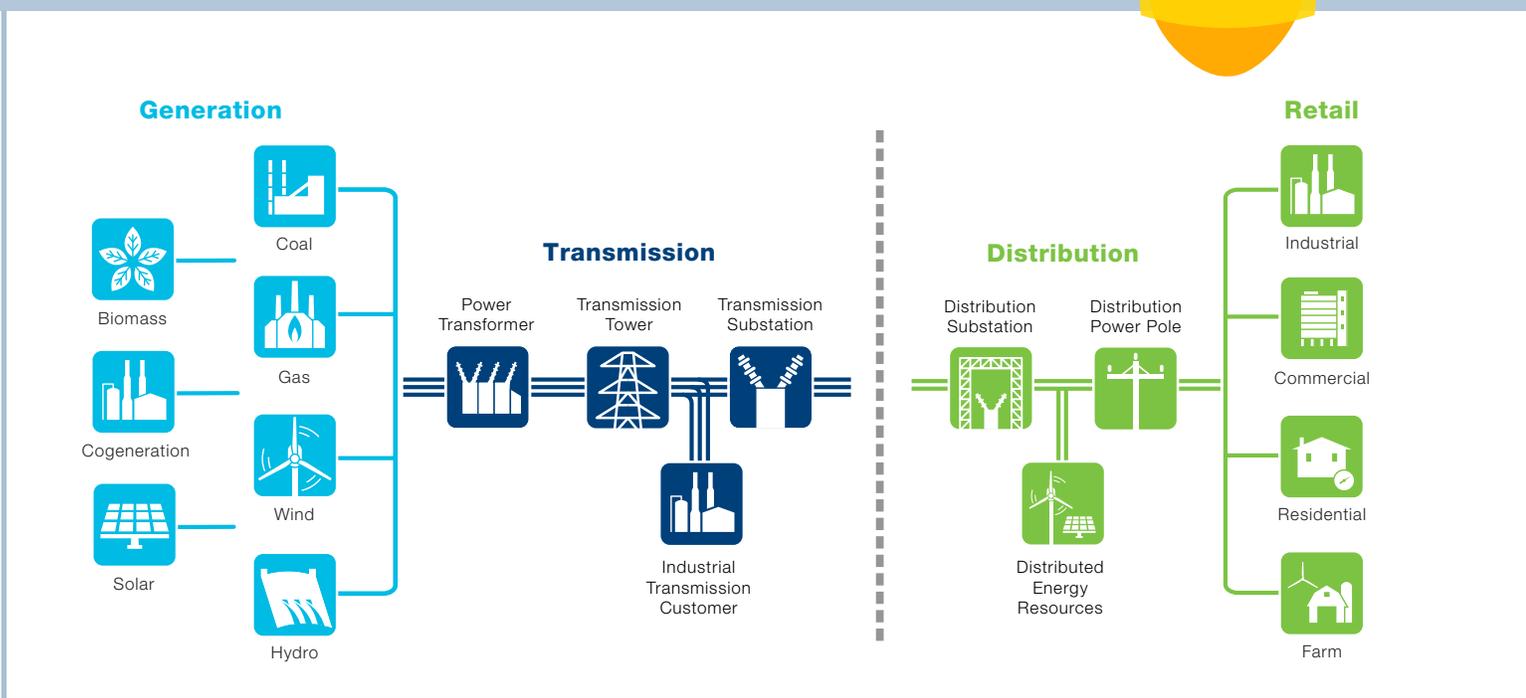
### HOW DOES ALBERTA'S ELECTRICITY INDUSTRY WORK?

Alberta's electricity industry is made up of four main parts: generation, transmission, distribution and retail.

**Generators** are commercial businesses that compete to sell the electricity they generate into the wholesale electricity market.

**Transmission Facility Owners (TFOs) and Distribution Facility Owners (DFOs)** build and operate the wires and related infrastructure within their service territory.

**Retailers** sell power they purchase from the wholesale electricity market to farms, businesses and homes.



### WHAT IS THE AESO'S ROLE?

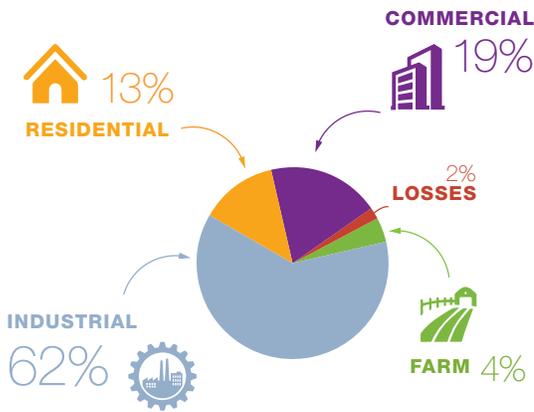
The Alberta Electric System Operator (AESO) is an independent not-for-profit agency of government that exists to ensure the province has reliable and affordable power.

We do this by working hard on behalf of Albertans in four key areas of our mandate:

- 1 Plan the transmission system** (wires and related infrastructure) for the future so Alberta's grid is ready as more power needs to travel from where it is generated to where it is used.
- 2 Connect customers** (electricity generators and large industrial operations) to the grid.
- 3 Develop and operate the wholesale electricity market** (manage the buying and selling of power).
- 4 Operate the grid** to ensure supply meets demand every minute of every day.

# HOW IS POWER USED AND WHERE DOES IT COME FROM?

## POWER USE

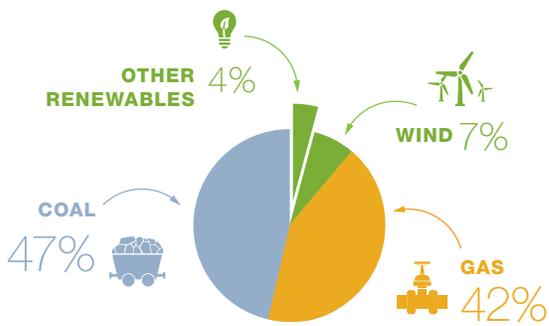


**AVAILABLE GENERATION**  
CAPACITY  
**16,106 MW**



**ALL-TIME RECORD**  
PEAK DEMAND  
**11,697 MW**  
(WINTER 2018)

## POWER GENERATION



## HOW IS TRANSMISSION DEVELOPED IN ALBERTA?

Our grid and market operations responsibilities give us a unique view of the entire system. This is essential to effectively and prudently plan transmission development.

**ALL ALBERTANS HAVE THE OPPORTUNITY TO VOICE THEIR THOUGHTS OR CONCERNS ABOUT TRANSMISSION PROJECTS TO THE ALBERTA UTILITIES COMMISSION (AUC).**

Our system controllers can see exactly what is happening on the grid. They share this with our forecasting team and transmission system planners to determine how the grid will have to evolve to meet Alberta's electricity needs. New transmission projects are included in our Long-term Transmission Plan (a 20-year forward-looking blueprint of grid developments).

When we determine it is the right time to advance the transmission system, we prepare a Needs Identification Document (NID) Application. We file it with the AUC, the provincial regulator, and it moves forward in the AUC's regulatory process. The TFO also needs to file a Facility Application with the AUC.

We have a responsibility to connect customers to the grid. Additional transmission infrastructure may be needed to connect their facilities. Projects connecting to the grid require the connection NID and the TFO facility application to be approved by the AUC before they can proceed.

## WANT TO LEARN MORE?

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