

Building the transmission ‘backbone’ to keep pace with extensive growth

- No major system backbone projects in more than 20 years
- Critical infrastructure projects needed to meet current and future electricity demand

Electric transmission system powers the province

- Moves power to meet Alberta’s needs
- Boosts and supports the economy
- Enables ‘green’ electricity to interconnect

Transmission system expansion

AESO is constantly monitoring the capacity of the transmission system to meet Alberta’s demand for electricity. To maintain reliability, the system must keep pace with Alberta’s growth.

Critical transmission infrastructure projects planned for completion over next 10 years

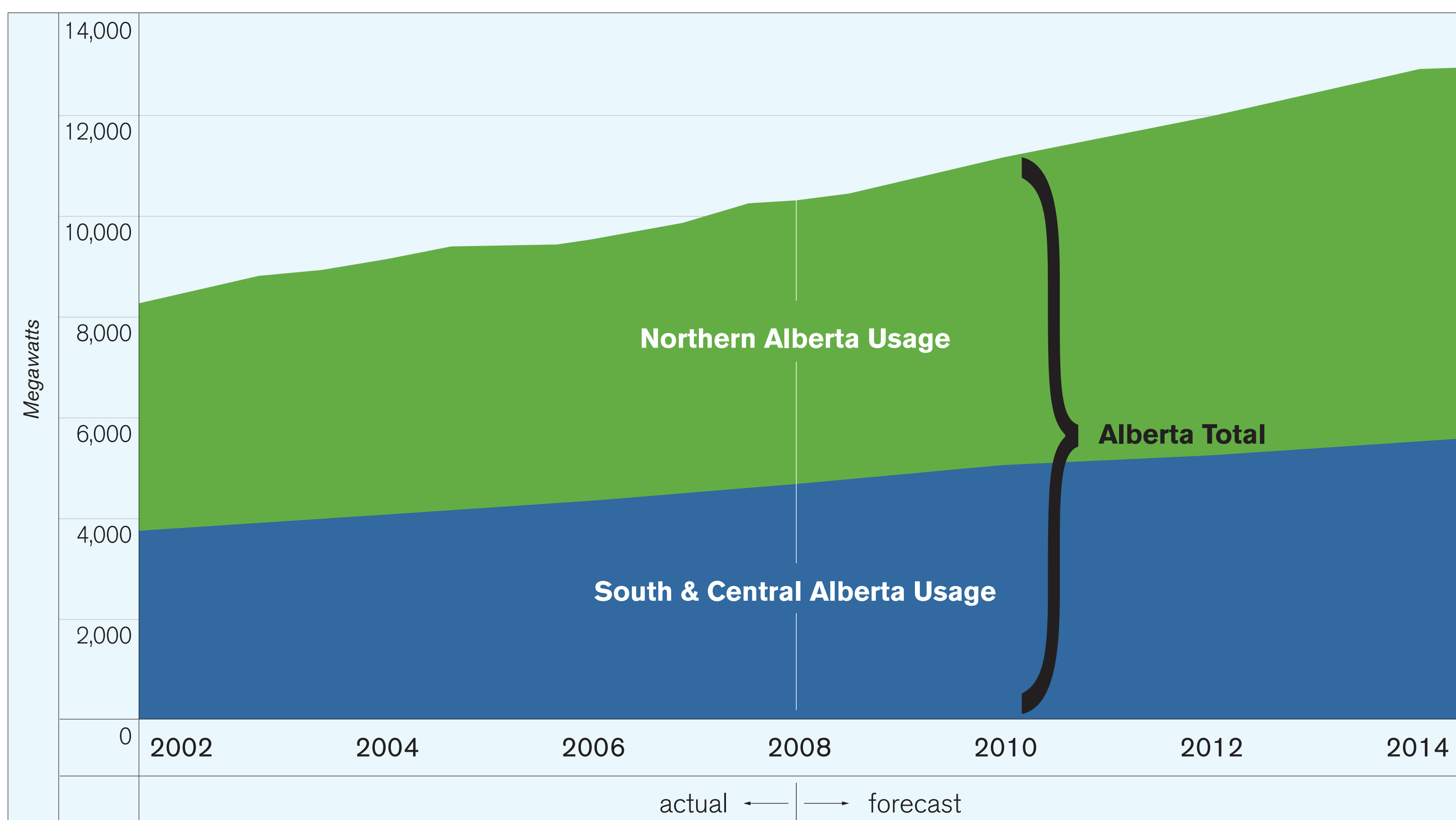
These projects will:

- Create stronger system between **Edmonton and Calgary**, carrying more power to customers in central and southern Alberta
- Meet power needs in the **Industrial Heartland** around Edmonton and north to **Fort McMurray**
- Increase ability of **southern system** to connect new wind farms and deliver that power where it's needed throughout Alberta
- Upgrade system in and around **Calgary** to carry additional electricity and strengthen power service throughout the area

Alberta's Current Load (*Demand*)

- Alberta's strong economy and population increase have put significant pressure on infrastructure
- Growth has been equal to adding two cities the size of Red Deer to the power system every year, for the past several years
- Current installed capacity is 12,264 MW and Alberta's average hourly load is approximately 8,000 MW

Peak Winter Demand



Alberta's Future Generation Needs

- Since 1996, approximately 4,000 MW of new power generation has been built in Alberta
- For the next 20 years, the average annual demand is forecast to grow by 3%
- An additional 5,000 MW of electricity supply by 2017 and 11,500 MW by 2027 will be required to meet growing demand

The AESO is:

A not-for-profit statutory company, operating in the public interest

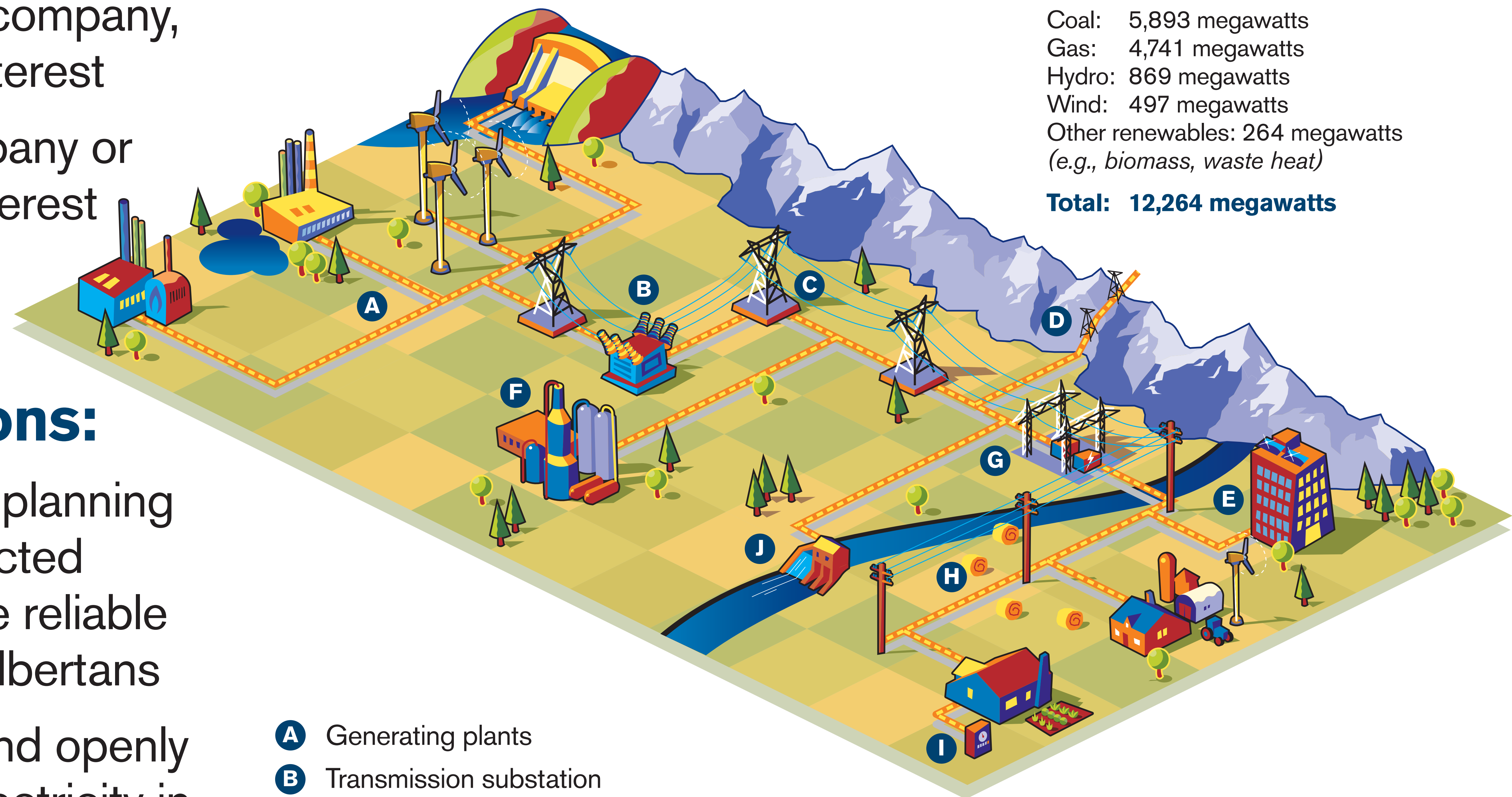
Independent of any company or person with a material interest in the electric industry

AESO Key Functions:

Operation and long-term planning of the Alberta Interconnected Electric System to ensure reliable transmission service to Albertans

Promote a fair, efficient and openly competitive market for electricity in Alberta market development in Alberta

Electricity at Work



Alberta's Generation Sources

(July 2009)

Coal: 5,893 megawatts
Gas: 4,741 megawatts
Hydro: 869 megawatts
Wind: 497 megawatts
Other renewables: 264 megawatts
(e.g., biomass, waste heat)

Total: 12,264 megawatts

- A** Generating plants
- B** Transmission substation
- C** Transmission line
- D** Intertie
- E** Solar panels
- F** Industrial customer
- G** Distribution substation
- H** Distribution line
- I** Power meter
- J** Run-of-river hydro power