

GROWING A DISTRICT ENERGY START-UP – IDEA 2016

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JUNE 22, 2016

start-up

noun

noun: **startup**

the action or process of setting something in motion.

"the start-up of marketing in Europe"

- a newly established business.

plural noun: **start-ups**; plural noun: **startups**

"problems facing start-ups and small firms in rural areas"



**By combusting natural gas
to heat water to 120°C**

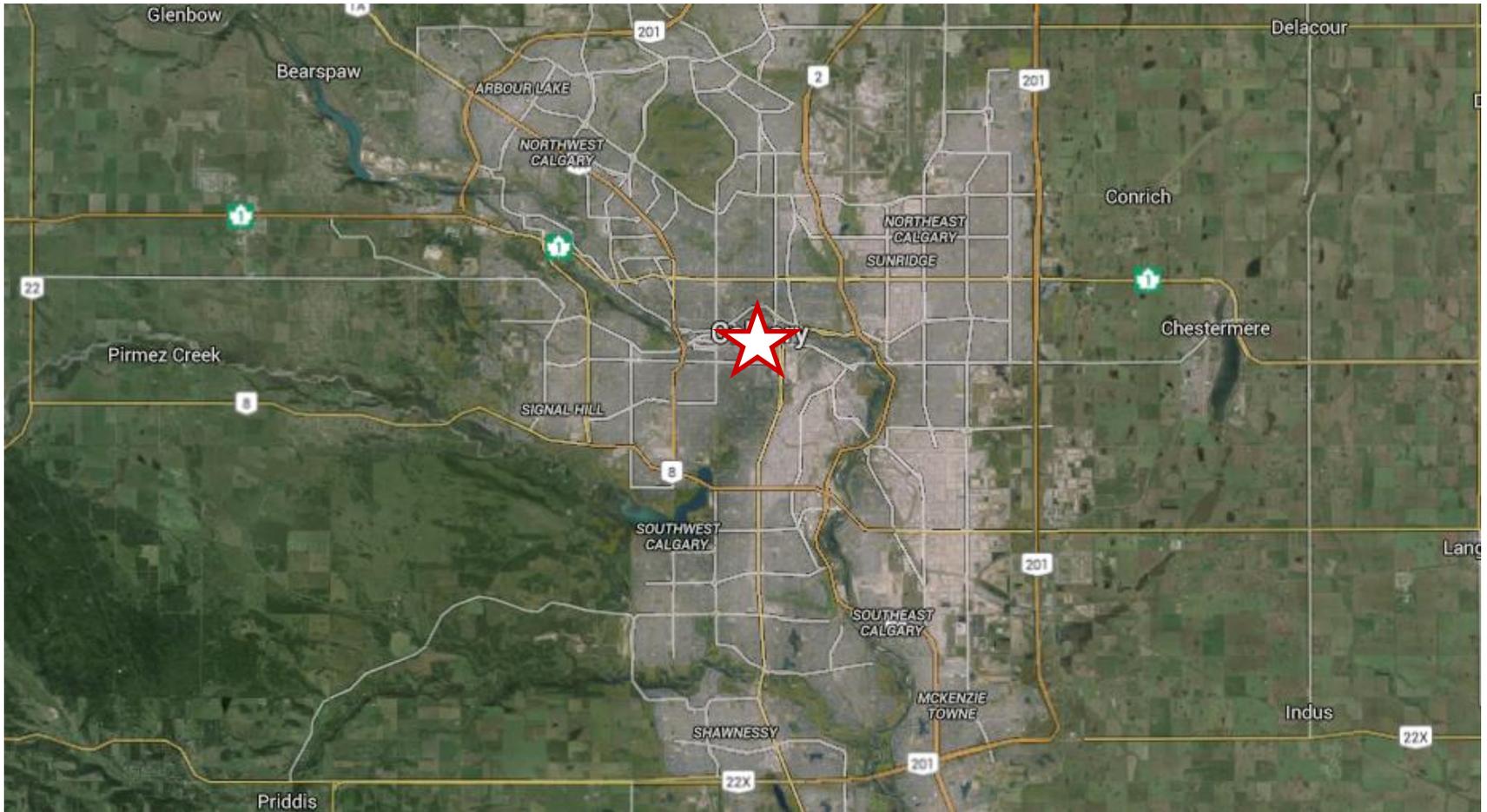


“Starting a District Energy business is easy.”

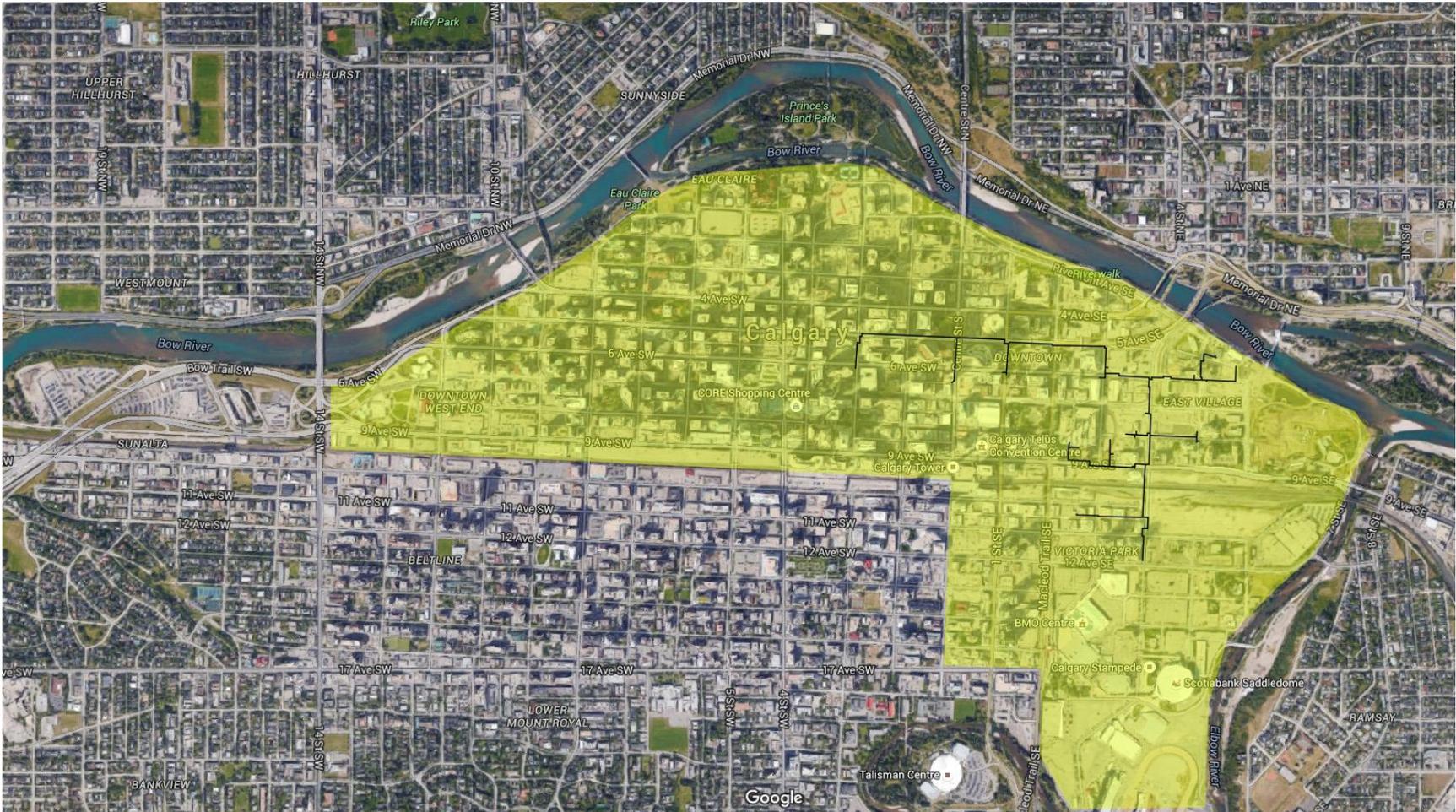
No-one. Ever.











ENMAX DISTRICT ENERGY & CHP

BACKGROUND

Commissioned in 2010 with 35 MW of thermal heating capacity (21,000 ft² building).

Partial funding of \$31M from federal and provincial program (CAMRIF).

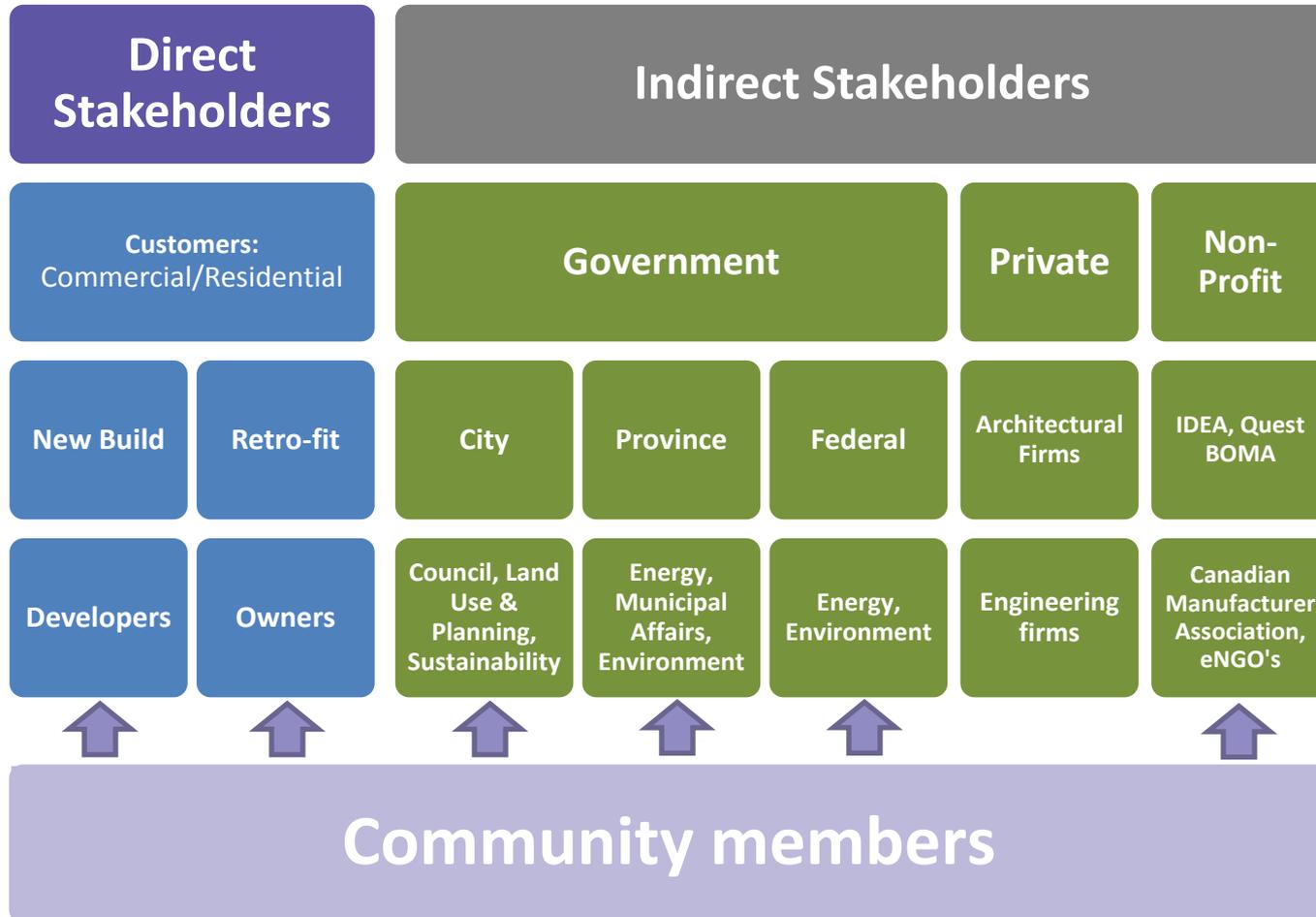
Nearly 8M ft² of connected or committed capacity.

5500 meters of pipeline installed throughout downtown and East Village district.

Added 20MW of additional boiler capacity in 2014 to meet demand (55 MW total).

Commissioning 3.3 MW of CHP in Q4 of 2017.

District Energy: Market Engagement



"If you build it...."



Image Credit: <http://simplestoryvideos.com/>



OUR CHALLENGES

First and only privately operated District Energy Centre in the province.

Building owners and operators are unfamiliar with District Energy.

Have strong value proposition but who wants to take on risk as early adopter.

No pipe in the ground. New connections require costly civil construction.

DE is non-regulated utility with no municipal mandate for buildings to connect.

Constrained by resources to execute.

Can we be competitive against self-generation over the contract term?

Our price is based on our cost.

**Customers decision is based
on their alternatives.**

OUR EVOLVING FINANCIAL MODEL

ENMAX requires no upfront capital.

*Recover the cost to connect each building + IRR
over contract term (20 yrs).*

*Fixed Capacity Charge (FCC) is the \$/kw/yr to
recover cost. Gas is variable.*

Ex. 1000 kw load x \$50 FCC = \$50,000/yr + gas.

Customers can prepay all or portions of the FCC.

*Each customer to pay a pro-rated share of the
generation, transmission, and distribution.*

Working to establish a market rate for heat.

*Thermal mapping downtown core and probability
weighting of future connections.*

OUR SUCCESS

17 buildings under contract. 13 connected.

Profitability is growing.

Planning for the addition of new supply.

Have created market pull for DE.

Strong value prop to retrofit scenarios in market conditions where capital is in short supply.

Set a standard for environmentally responsible energy generation in the Province.

Other municipalities are looking to ENMAX to construct DE for their communities.

Questions?