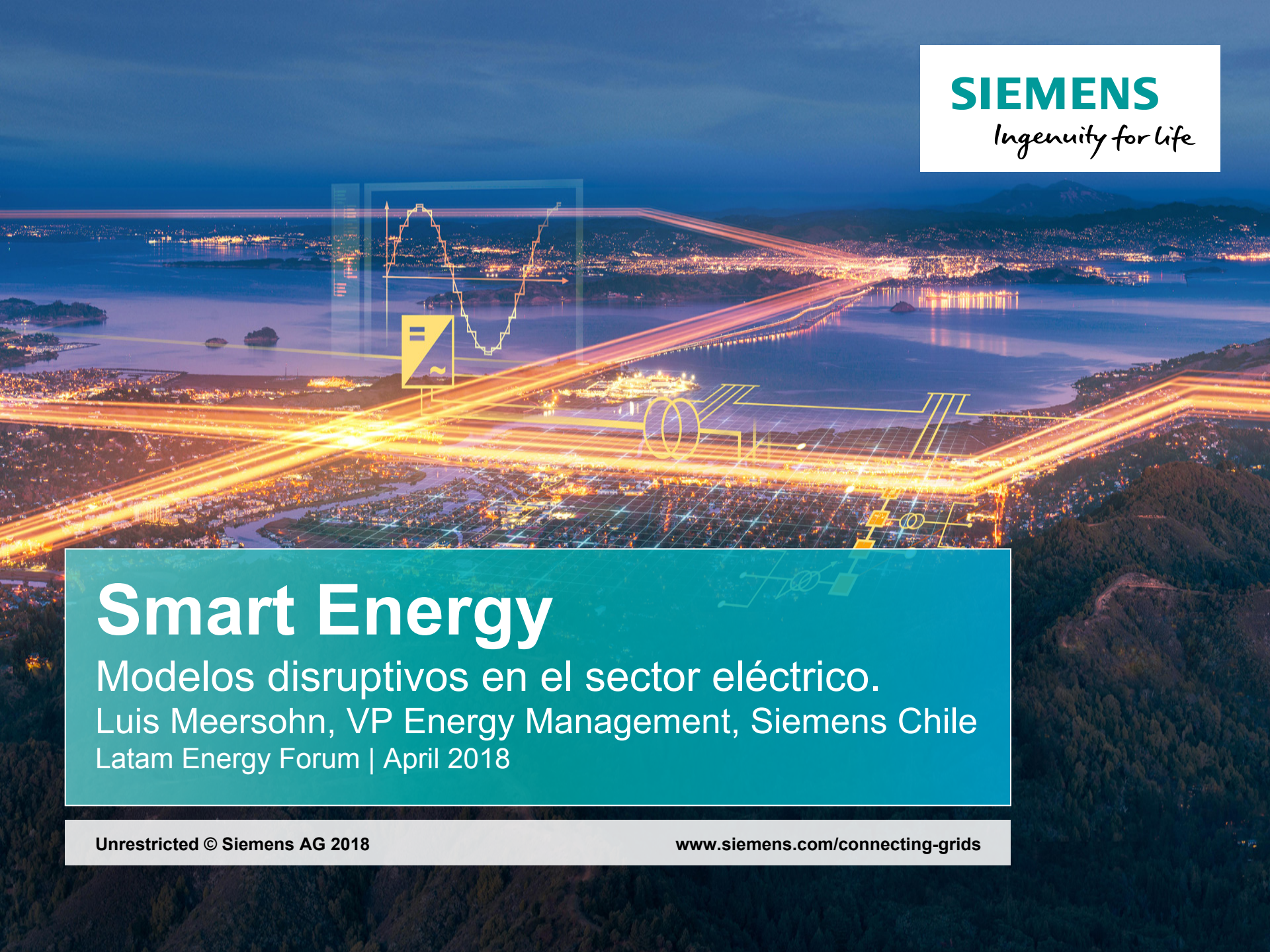

Smart Energy

Modelos disruptivos en el sector eléctrico.

Luis Meersohn, VP Energy Management, Siemens Chile

Latam Energy Forum | April 2018

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The energy system has changed fundamentall

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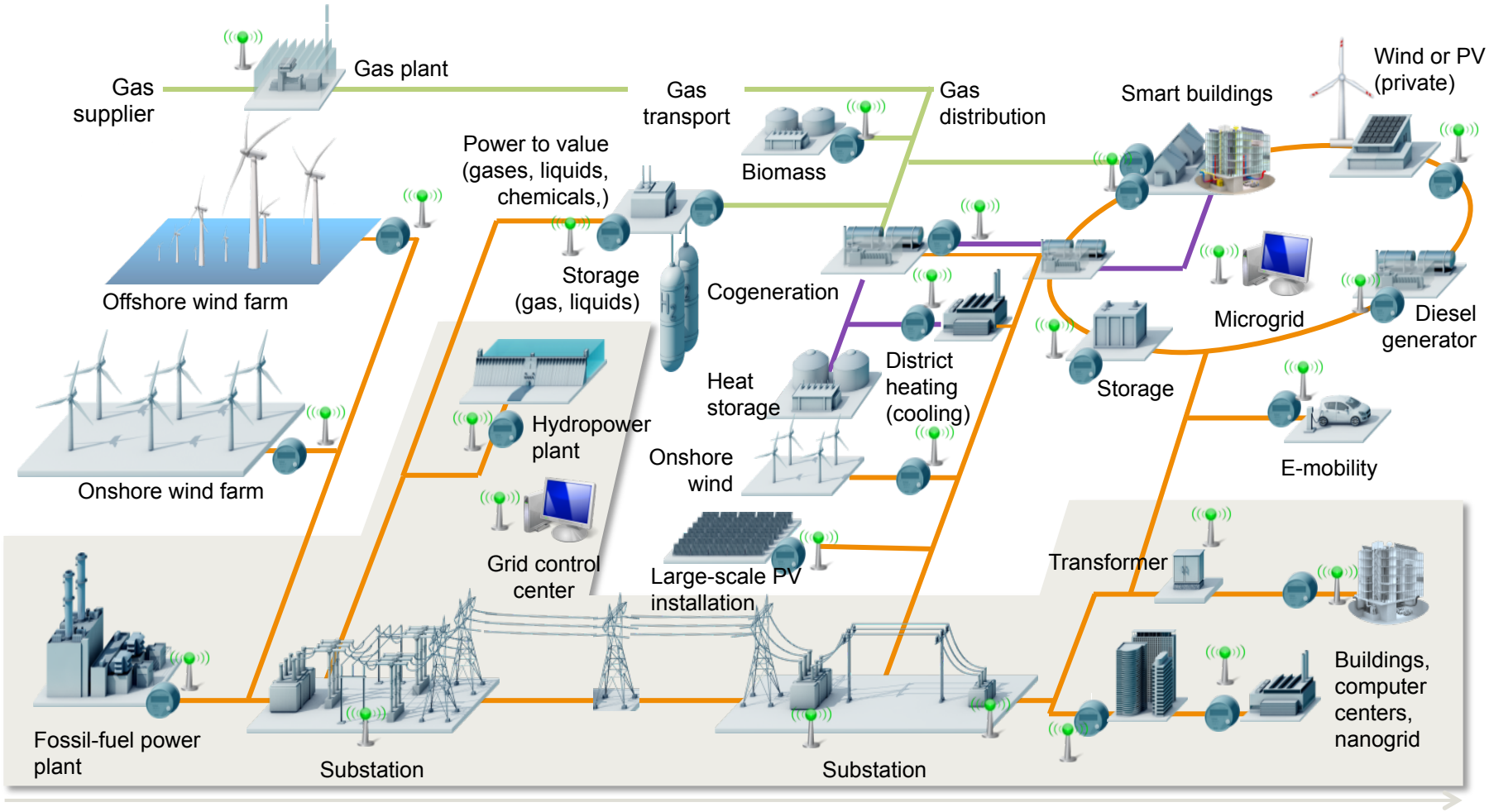

Electricity | Gas | Cooling / heating | Smart electricity meters | Conventional power grid

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The energy system has changed fundamentally

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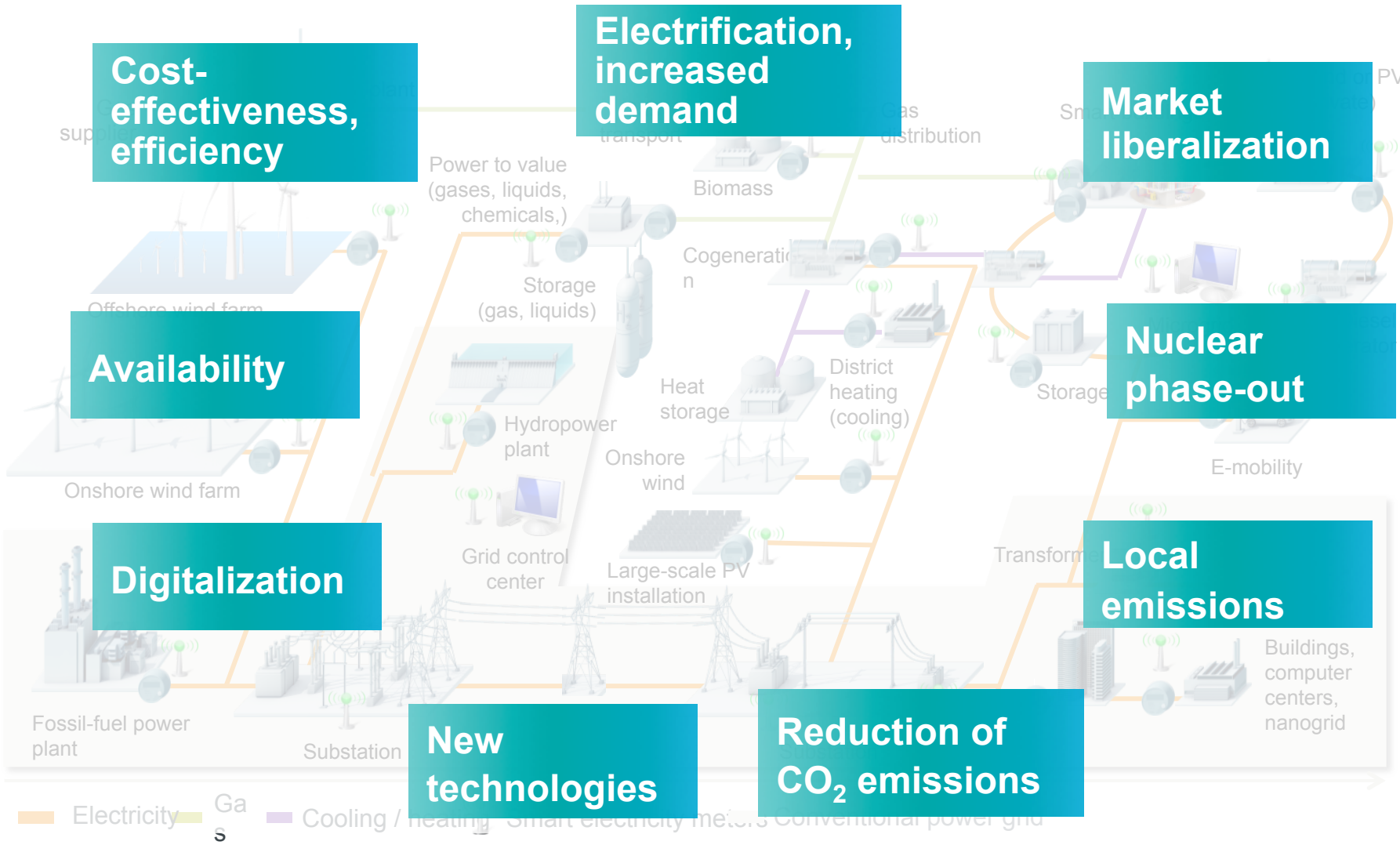

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Variable generation and consumption threaten grid stability

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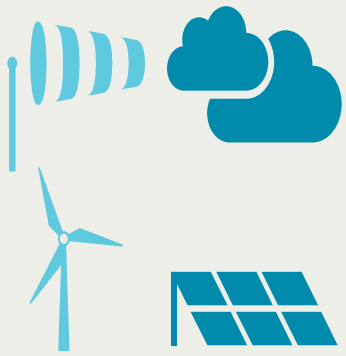
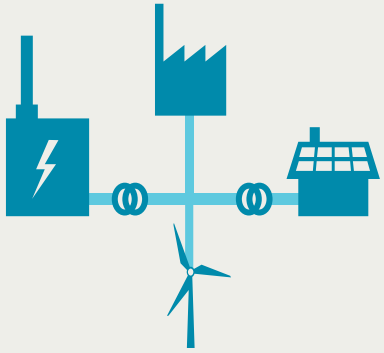


Variable power generation

Renewable energy sources provide fluctuating output

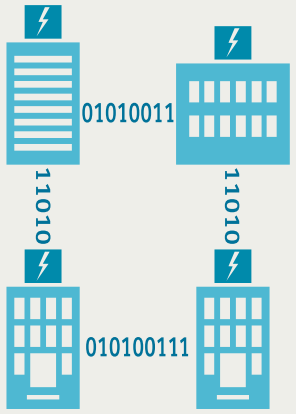
Capacity constrains

Requires fast reacting grid control and adap-tive assets



Frequency and voltage stability challenges

Expansion of capacities and the optimization of existing grids



Shorter market time intervals

Digitalization requires fast reaction to changing markets

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Interconnection SIC-SING
Project DS 115 Polpaico - Cardones in 500kv

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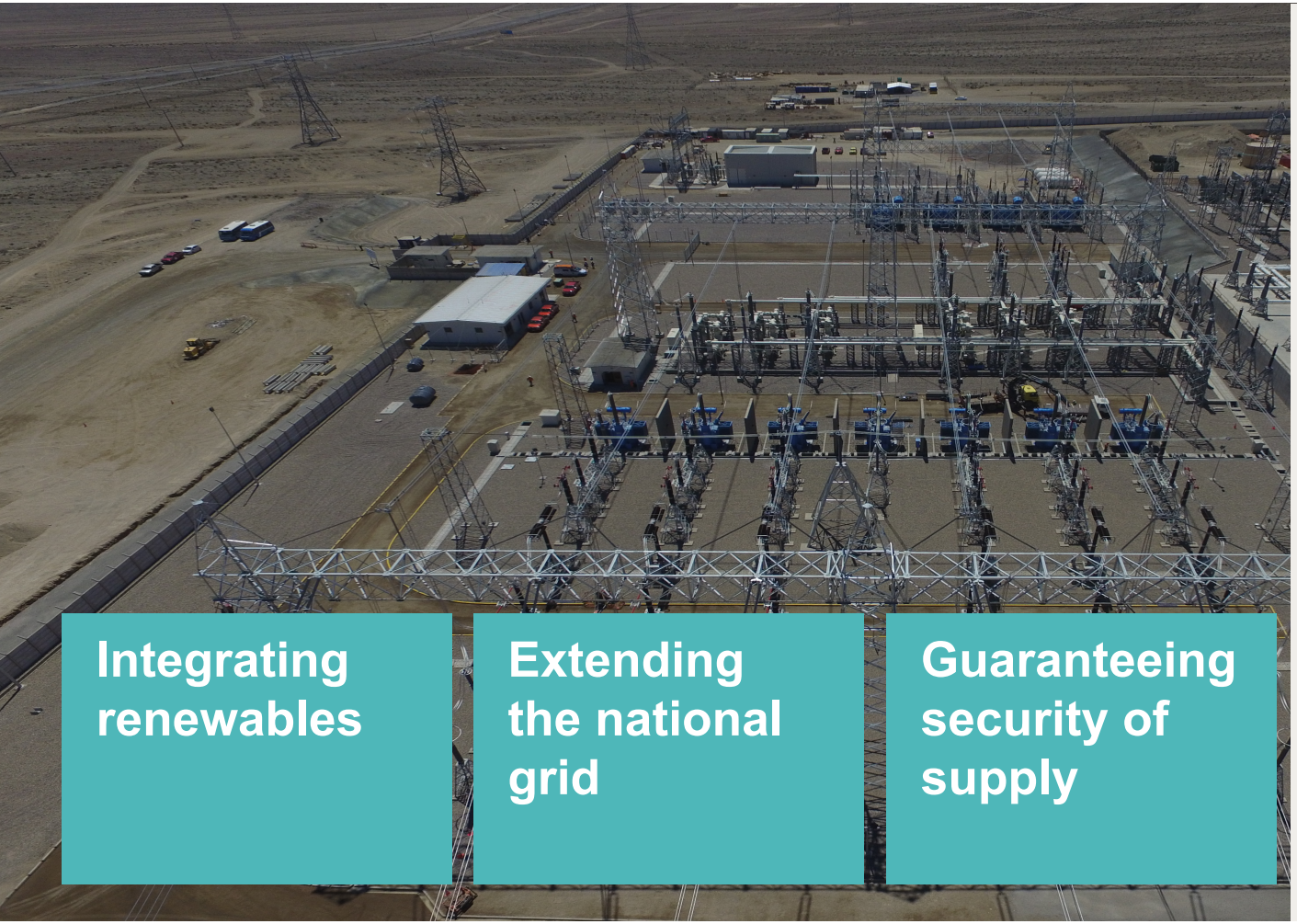

Challenge

- Connecting the two main power grids in Chile.

Solution

- 6 GIS substations, 3 in 500 kV & 3 in 220 kV.
- 5.000 MVA of inductive equipment transported & installed.
- 690 km of cables.

Benefits to customers

- Making the renewable energy potential available for 98% of the users.
- Lower energy prices

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Grid stability under extreme altitude conditions STATCOM solutions for Bacatá Colombia.

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Challenge

Stabilizing the power supply to for 12 million residents in the center of Colombia in case of regional shutdowns.

Solution

500 kV / 60 Hz

System voltage

STATCOM

with -200 (inductive)
and 200 (capacitive) MVAr

2600 masl.

High Altitude & Sismic conditions

Benefits to customers

Enhance stability

of the transmission grid by voltage control & provide

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HVDC connecting two islands
Inter Island Connector Pole 3, New Zealand

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Challenge

Upgrade/replacement of existing system with extreme earthquake requirements

Solution

1,400 MW
bidirectional

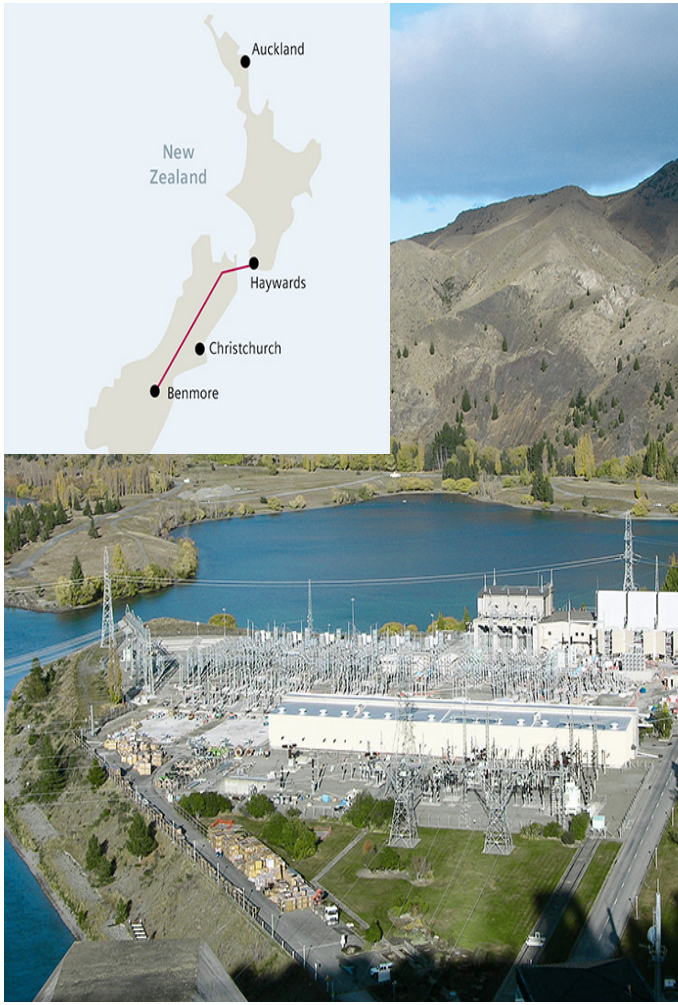
±350 kV DC

649 km
incl. 40 km submarine cable

Benefits to customers

Low-loss / reliable

Grid as backbone of New Zealand's transmission system



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We are driving innovation

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Our Claim

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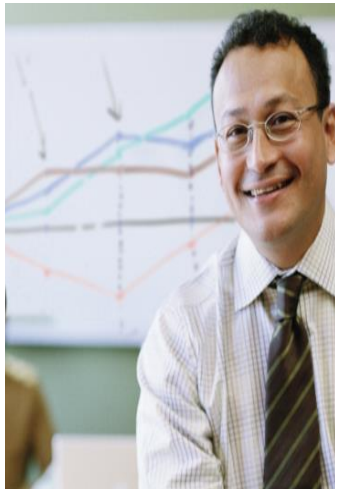
Excellence in project execution	Partner in Financing	Life-time consultant	Locally present	Service



Innovation is more than just technology

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Thank you for your attention!
Any Questions?

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