

GLOBAL SMART GRID DRIVERS

IEA/SEAI, DUBLIN IRELAND

COLIN MCKERRACHER

12 SEPTEMBER 2012



Bloomberg
NEW ENERGY FINANCE

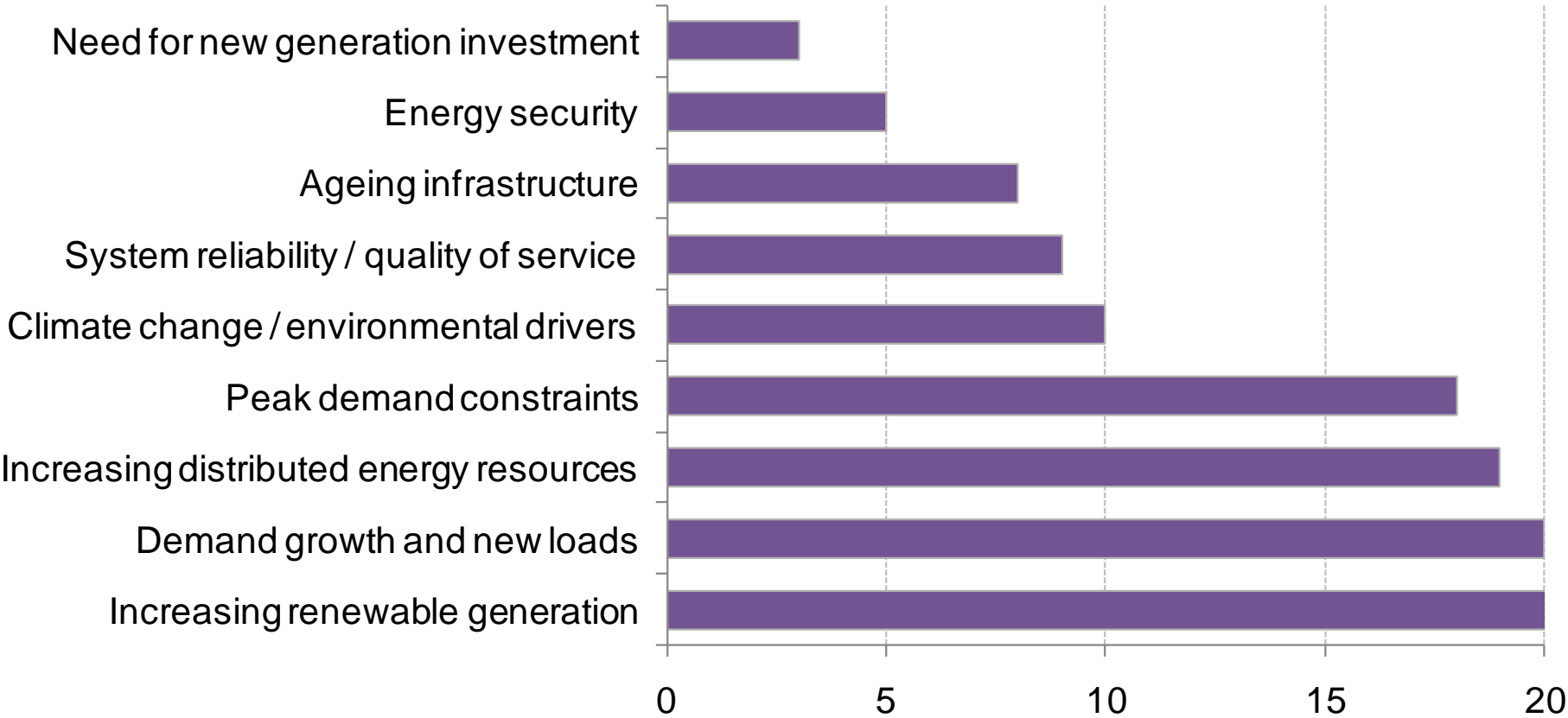
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Smart grid: a global market

Smart grid drivers

Case studies

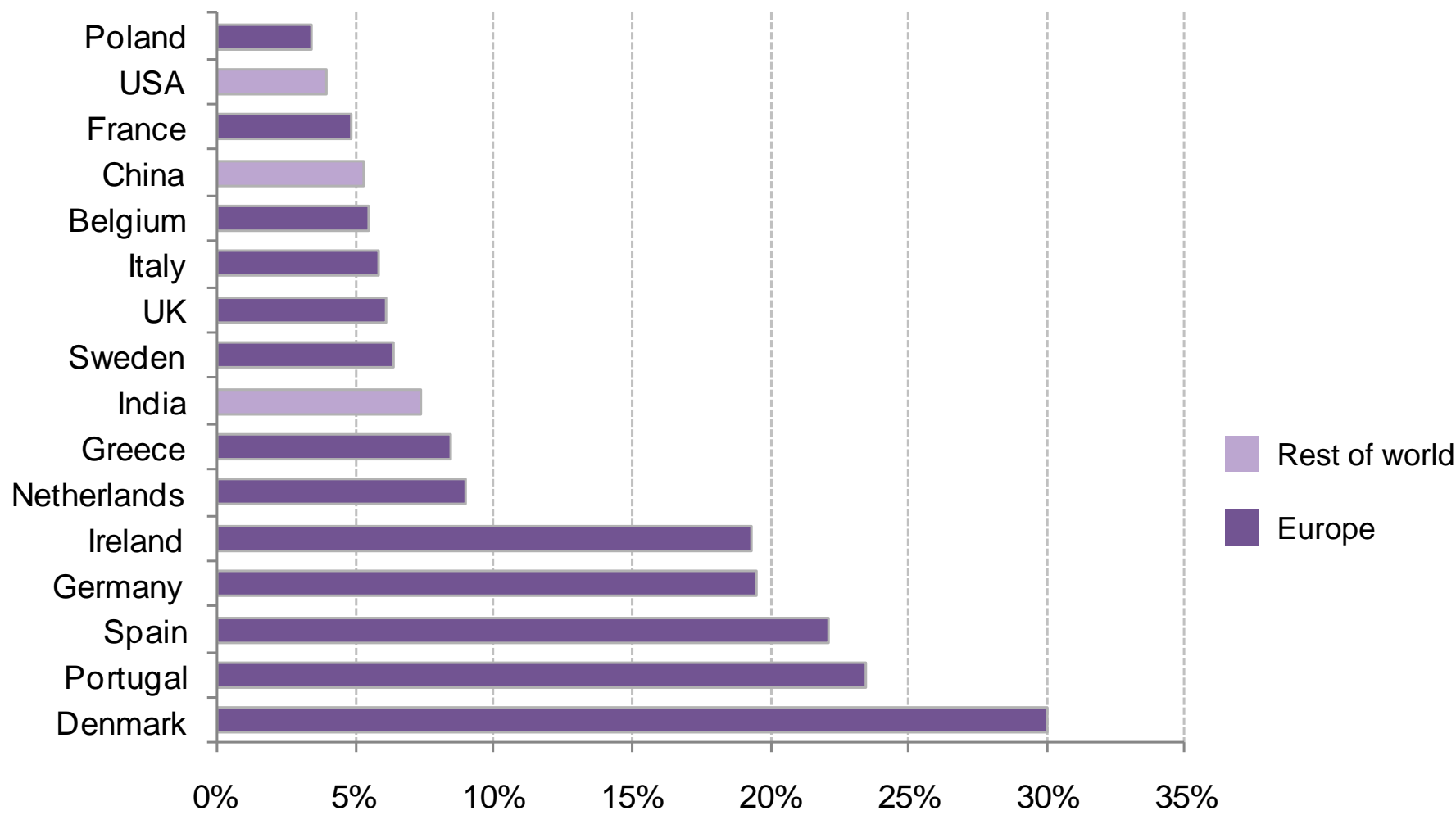
SMART GRID DRIVERS



Note: 26 responses received; total 114 votes cast. New loads = electric vehicles, heat pumps etc.

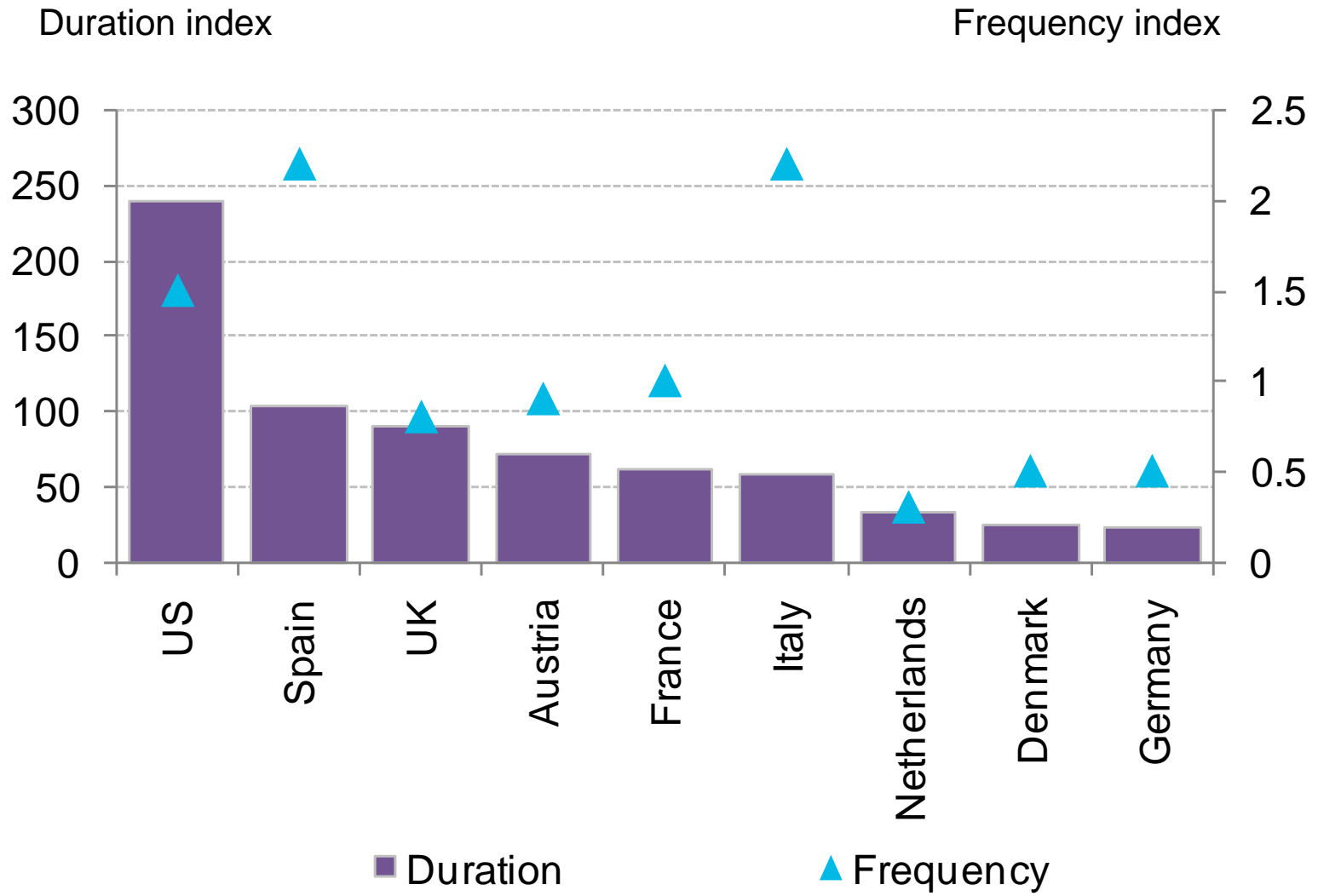
Source: BNEF Pre-Forum Survey.

DRIVERS: WIND PENETRATION (% OF INSTALLED CAPACITY)



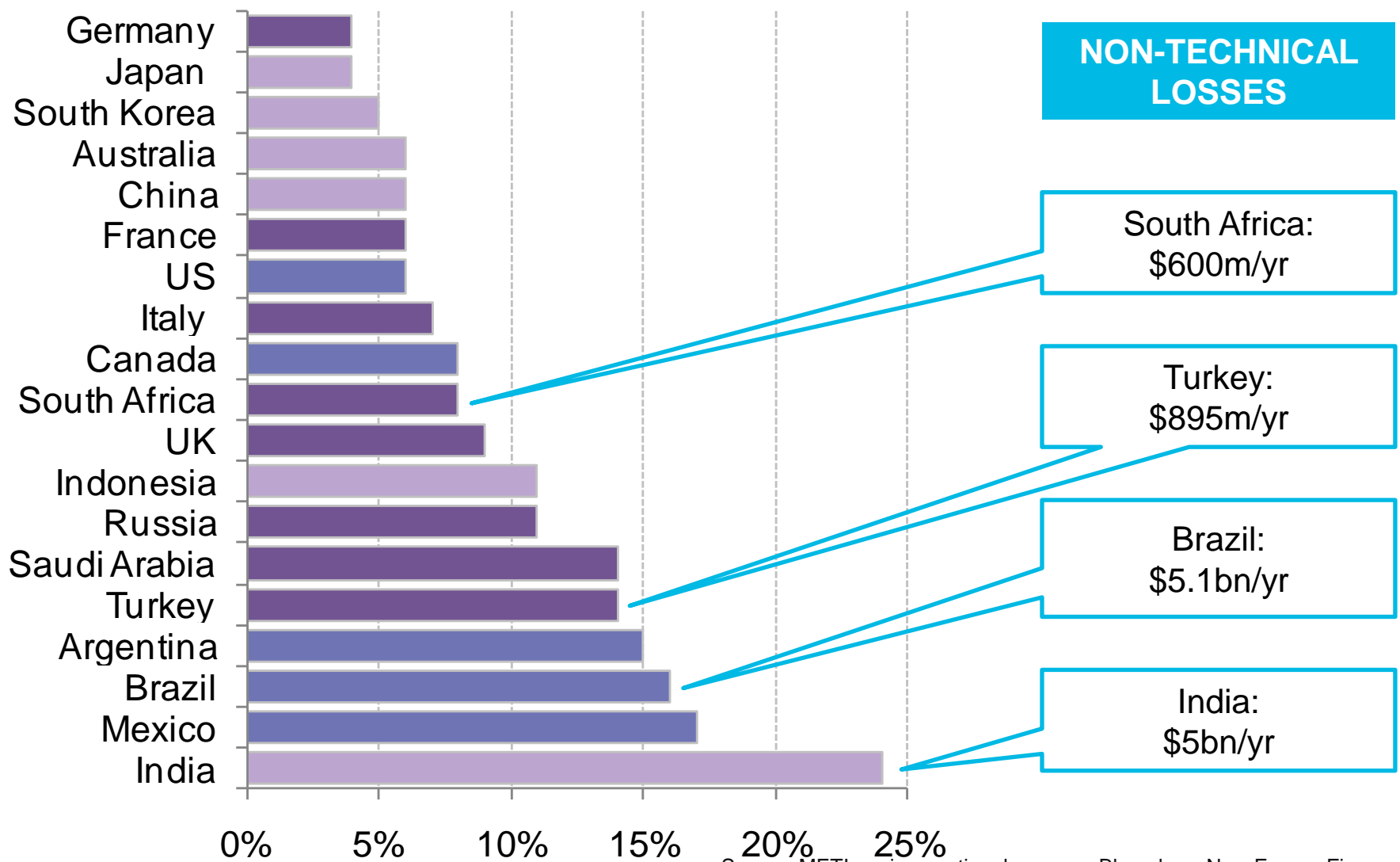
Source: Bloomberg New Energy Finance.

DRIVERS: SYSTEM AVERAGE INTERRUPTION INDICES BY COUNTRY



Note: 2007 data. Source: CEER, Bloomberg New Energy Finance.

DRIVERS: TRANSMISSION & DISTRIBUTION LOSSES IN G20 NATIONS, 2009 (% OF POWER GENERATED)



SMART GRID DRIVERS AND PROJECT TYPES

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	AMI	Distribution automation	HEMS/ BEMS	Energy storage	Demand response
Increasing renewable generation	√	√		√	√
Improved grid reliability	√	√		√	√
Reduce non technical losses	√	√			
EV integration			√	√	
Rising peak demand	√		√	√	
Ageing infrastructure	√	√	√	√	√

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Source: Bloomberg New Energy Finance..

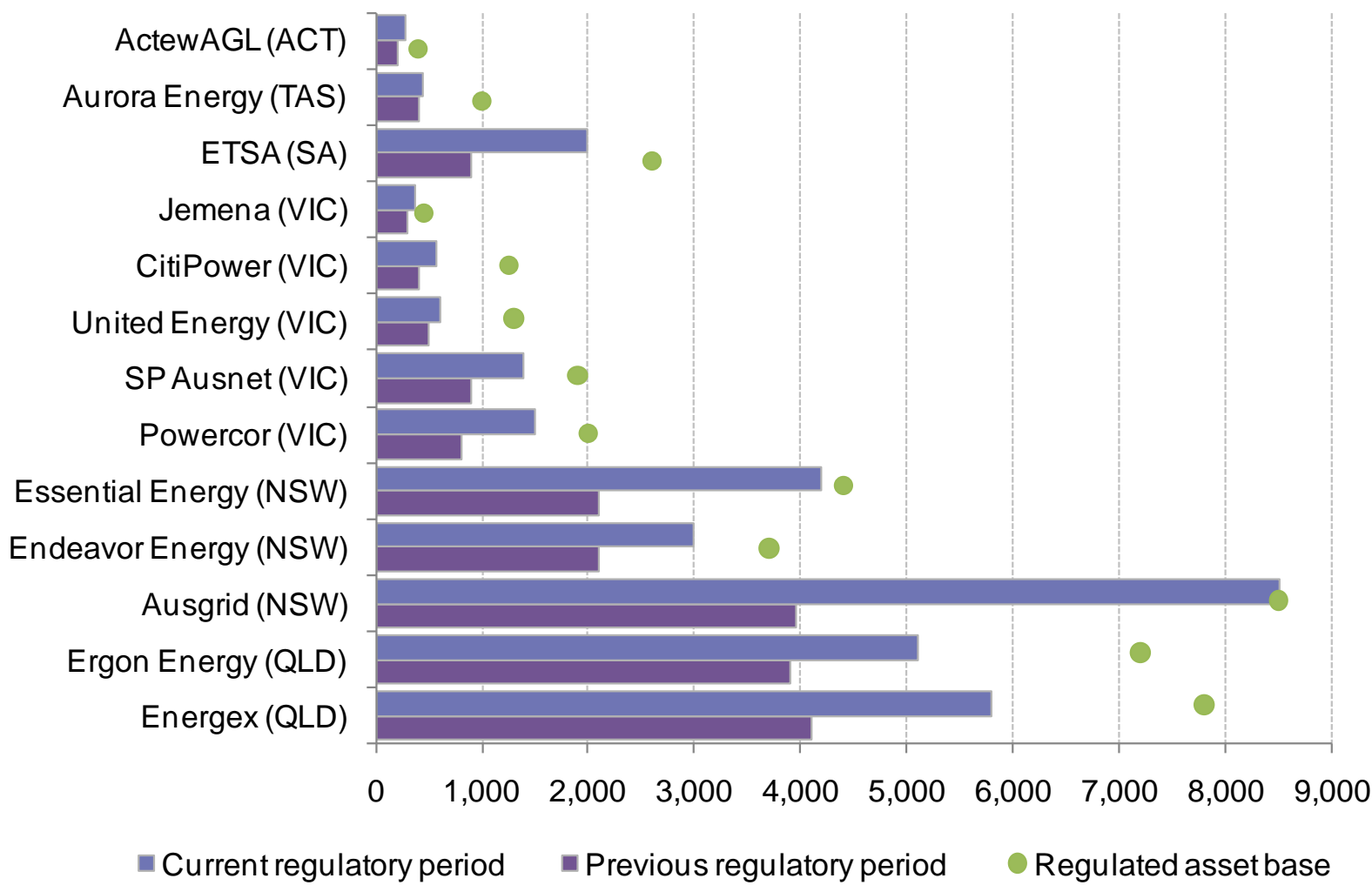
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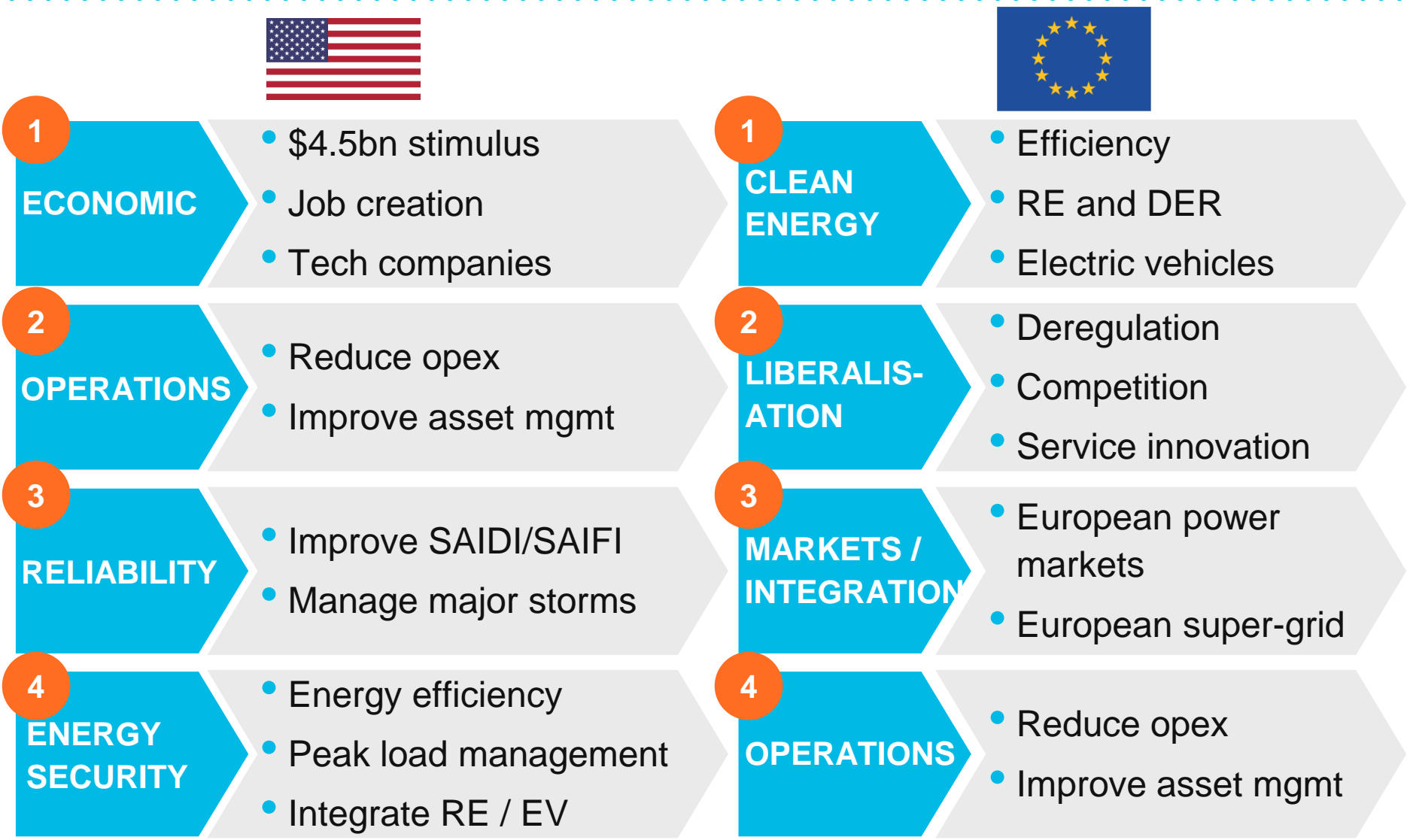
CASE STUDY- AUSTRALIA T&D INFRASTRUCTURE INVESTMENTS (AUD M)



Source: Bloomberg New Energy Finance..

SMART GRID DRIVERS: US VS. EUROPE

KEY DRIVERS FOR INVESTMENT

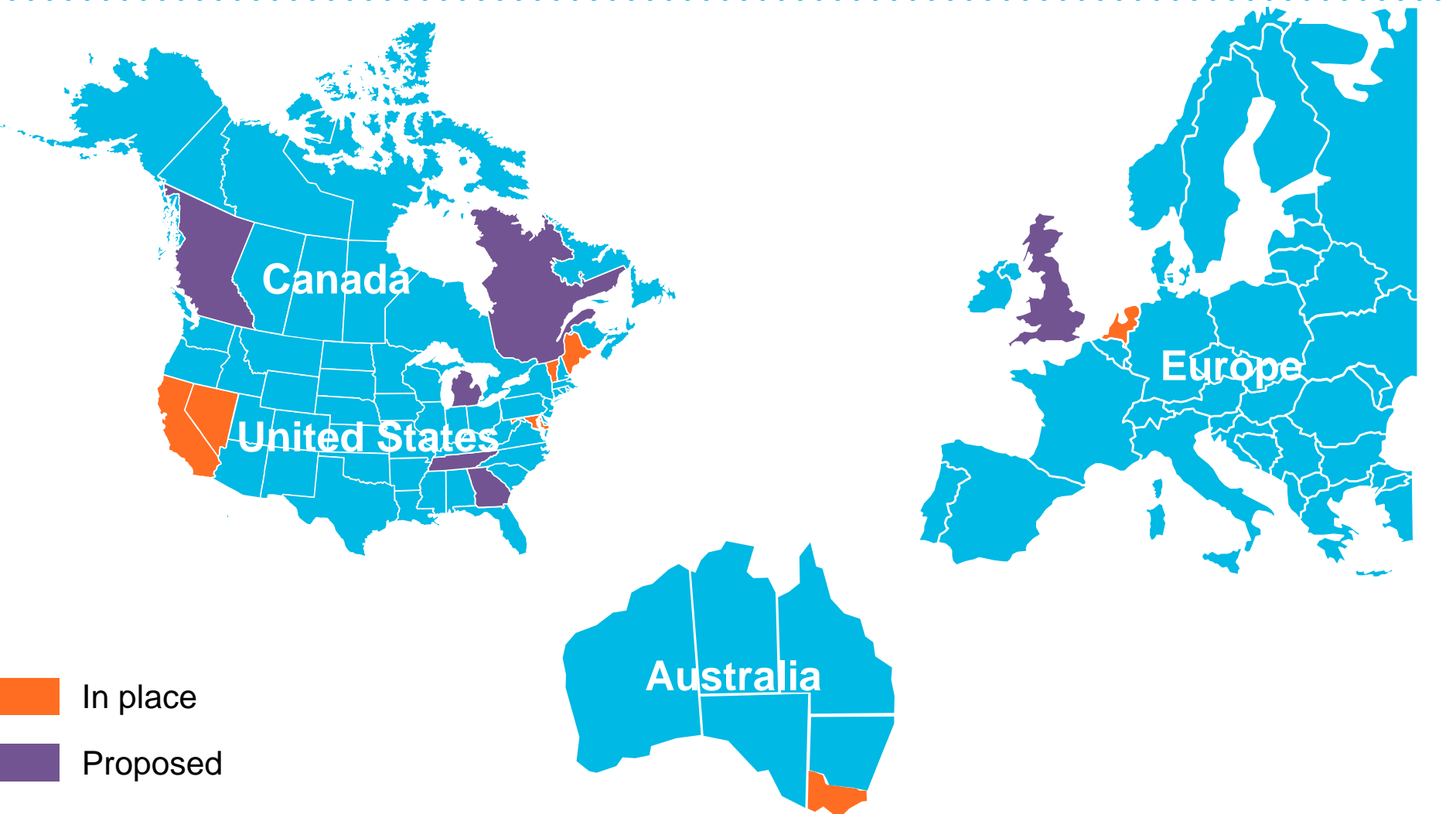


BUT, THE PICTURE CAN CHANGE



STATES AND COUNTRIES WITH OPT-OUT PROVISIONS FOR CONSUMERS TO REFUSE SMART METERS

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Note: No opt-out programme in UK, but regulator has clarified that consumers cannot be forced to have a smart meter. Australia opt-out is for TOU only.

Source: Bloomberg New Energy Finance

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GLOBAL SMART GRID DRIVERS

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Energy Smart Technologies
Renewable Energy Certificates
Carbon Capture & Storage
Power
Water
Nuclear

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