

WORLD ENERGY ISSUES MONITOR 2019

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World Energy Issues Monitor WORLD Busines ENERGY COUNCIL Understanding the Monitor Uncertainty **Critical Uncertainties:** What keeps Energy Leaders awake at night **Action Priorities:** What keeps Energy Leaders Weak Signals busy at work Size of bubble = level of urgency World Energy Issues Monitor 2019 - Understanding the Monitor Impact 🕨



Energy Counc

World Energy Issues Monitor Understanding the Monitor



Critical uncertainties: Issues with high uncertainty and high impact (in the top-right quadrant) are the 'critical uncertainties' with no clear path of action which keep energy leaders most awake at night. These issues need to be part of the energy leaders' dialogue and scenario analysis. \rightarrow What keeps energy leaders awake at night?

Action priorities: The issues in the high-impact and low-uncertainty space are those which keep energy leaders most busy (bottom-right, 'action issues').

→ What keeps energy leaders busy at work?

Weak signals: The low-impact and low-uncertainty issues (bottom-left quadrant) include those of perceived lesser importance or those that are still not fully understood and in need of further investigation.

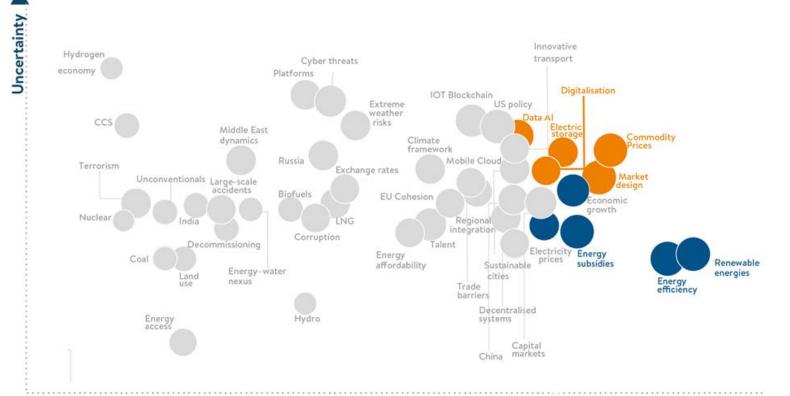
Survey responses are translated into issue monitors with the <u>three assessed dimensions</u>: the <u>impact</u> of an issue on the energy sector – this forms the x axis; the degree of <u>uncertainty</u> related to its impact – this forms y axis; the <u>urgency</u> with which we need to address the specific issue – represented by the proportional size of the issue bubble where a larger size corresponds to a higher degree of urgency.



GLOBAL

World Energy Issues Monitor Global Issues Map - 2019





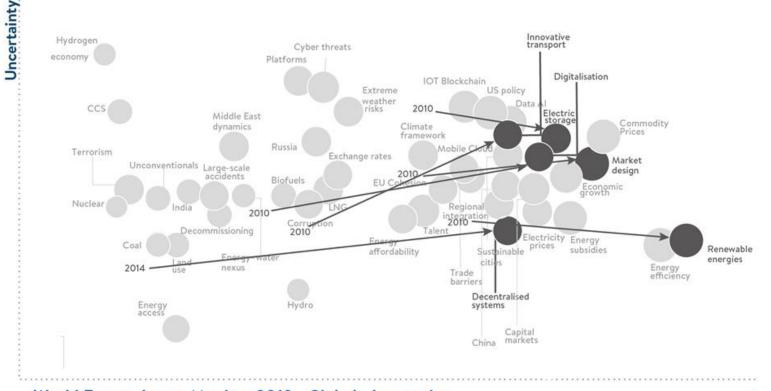
World Energy Issues Monitor 2019 - Global

- Critical uncertainties: what keeps energy leaders awake at night
- Action priorities: what keeps energy leaders busy at work
- Less urgent O More urgent



World Energy Issues Monitor Innovation Time Tracking



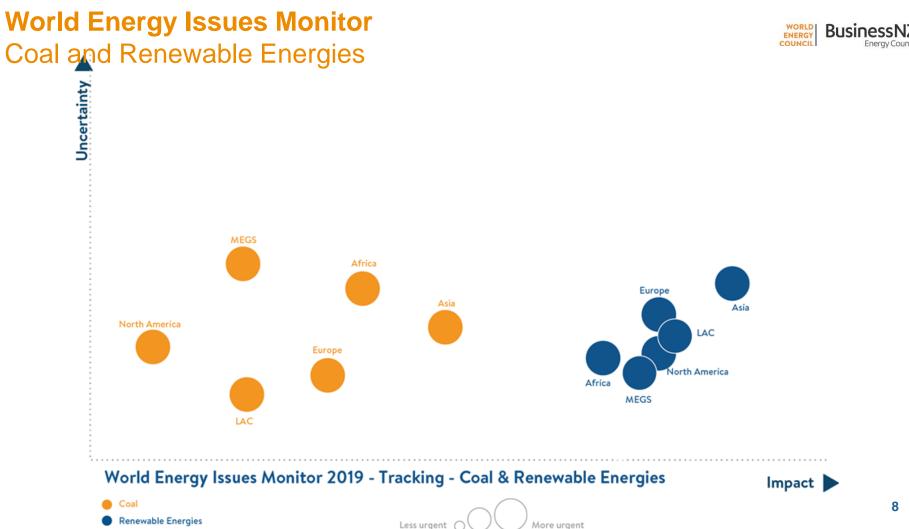


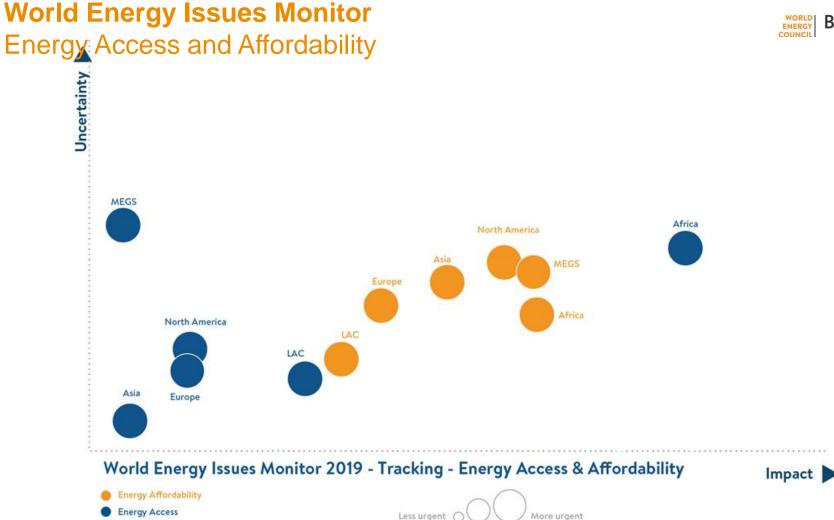
World Energy Issues Monitor 2019 - Global - Innovation

Impact 🕨

Timetracking of select issues from 2010 to 2018

More urgent Less urgent

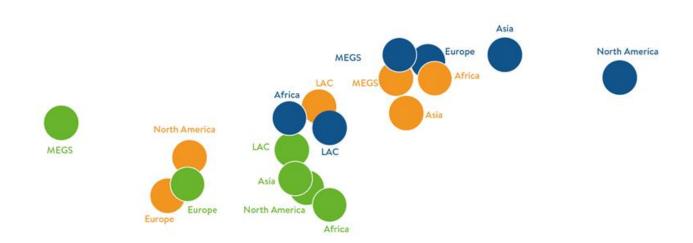






World Energy Issues Monitor Biological Diversity Issues





World Energy Issues Monitor 2019 - Tracking - Biological Diversity Issues









NEW ZEALAND

World Energy Issues Monitor New Zealand Issues Map - 2019 Decentralised Uncertainty systems Mobile Cloud US policy Platforms IOT Blockchain Climate framework Hydrogen Trade barriers Market Data Al Cyber threats Russia design Extreme Decommissioning weather risks Digitalisation Middle East Sustainable dynamics India cities Biofuels China Electric EU Cohesion growth storage Innovative transport Exchange rates Land Capital markets use Economic Renewable energies Energy Unconventionals subsidies **LNG** Energy affordability Electricity Hydro Terrorism Talent prices Energy Coal Regional Nuclear efficiency integration Large-scale accidents Commodity Energy-water Prices nexus Corruption Energy access

Less urgent

World Energy Issues Monitor 2019 - New Zealand

Critical uncertainties: what keeps energy leaders awake at night

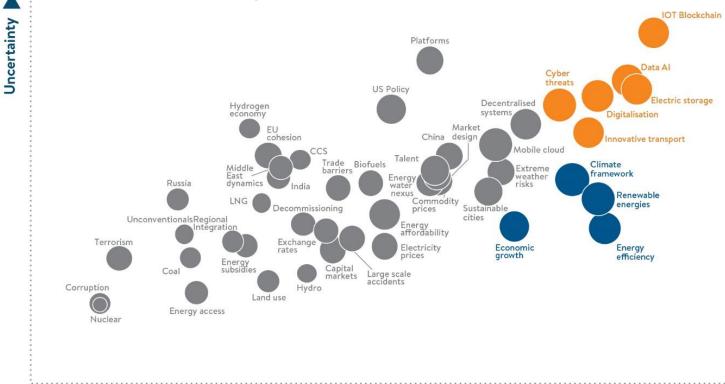
Action priorities: what keeps energy leaders busy at work





World Energy Issues Monitor New Zealand Issues Map - 2018





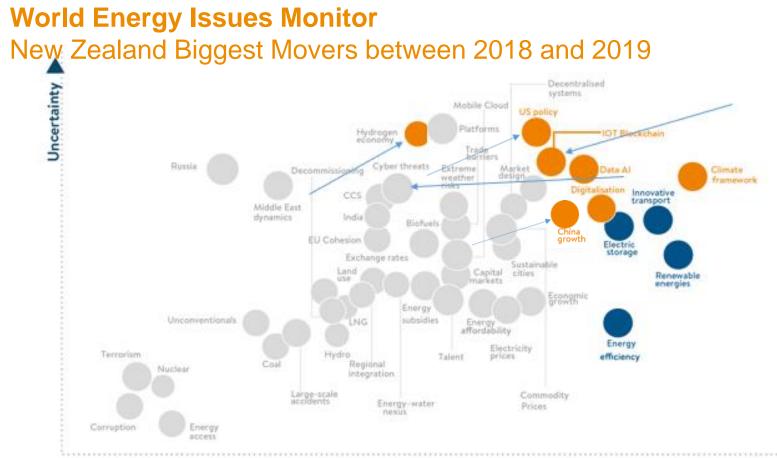
World Energy Issues Monitor 2018 - New Zealand

Critical uncertainties: what keeps energy leaders awake at night

Action priorities: what keeps energy leaders busy at work

Less urgent O More urgent





Less urgent

World Energy Issues Monitor 2019 - New Zealand

Critical uncertainties: what keeps energy leaders awake at night

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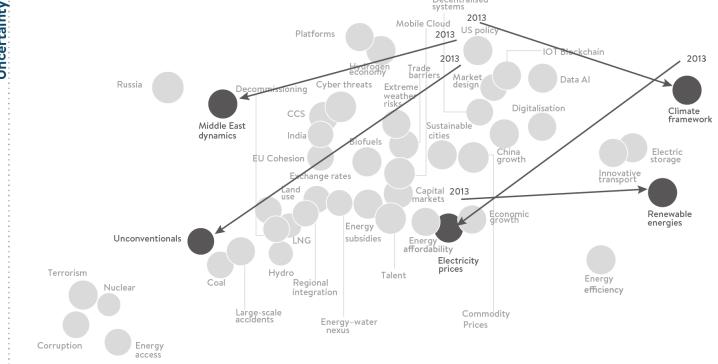
/ More urgent





World Energy Issues Monitor New Zealand Biggest Movers over the last six years





World Energy Issues Monitor 2019 - New Zealand - Biggest Movers



Timetracking of select issues from 2013 to 2018



World Energy Issues Monitor New Zealand – Public Sector Extreme weather Uncertainty risks US policy Cyber threats Data Al Trade barriers Digitalisation Platforms Hydrogen Middle East economy dynamics China Innovative growth transport Energy-water nexuš CCS India Market design Russia Biofuels Decentralised **IOT Blockchain** systems Mobile Cloud Commodity Regional Prices Land Sustainable integration Electric cities Climate use Unconventionals EU Cohesion storage Electricity framework Decommissioning Capital markets prices Terrorism Exchange rates LNG Renewable Economic growth Large-scale Energy energies accidents subsidies Energy affordability Coal Energy Talent Energy access Hydro efficiency Nuclear Corruption

World Energy Issues Monitor 2019 - New Zealand - Public Sector

Critical uncertainties: what keeps energy leaders awake at night

Action priorities: what keeps energy leaders busy at work

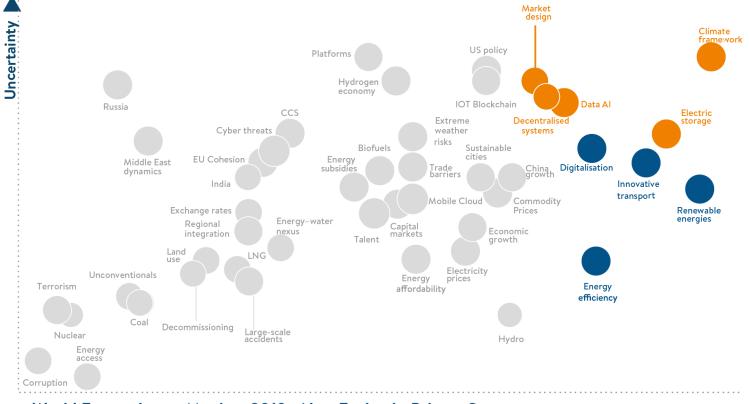
Less urgent O More urgent





World Energy Issues Monitor New Zealand – Private Sector





World Energy Issues Monitor 2019 - New Zealand - Private Sector

Critical uncertainties: what keeps energy leaders awake at night

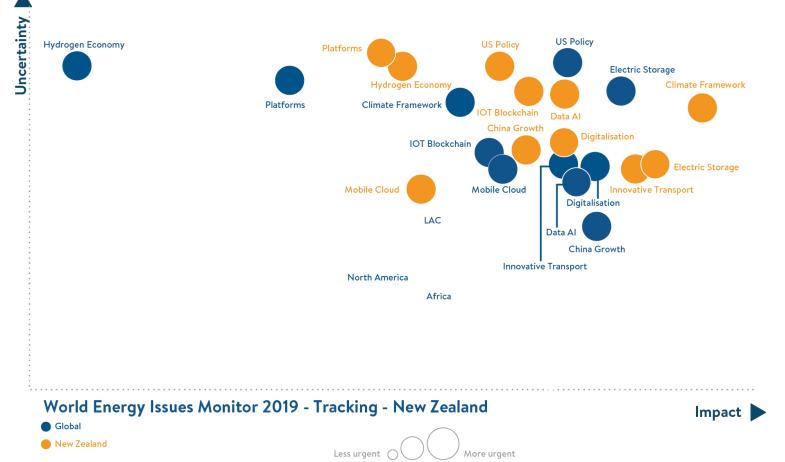
Action priorities: what keeps energy leaders busy at work

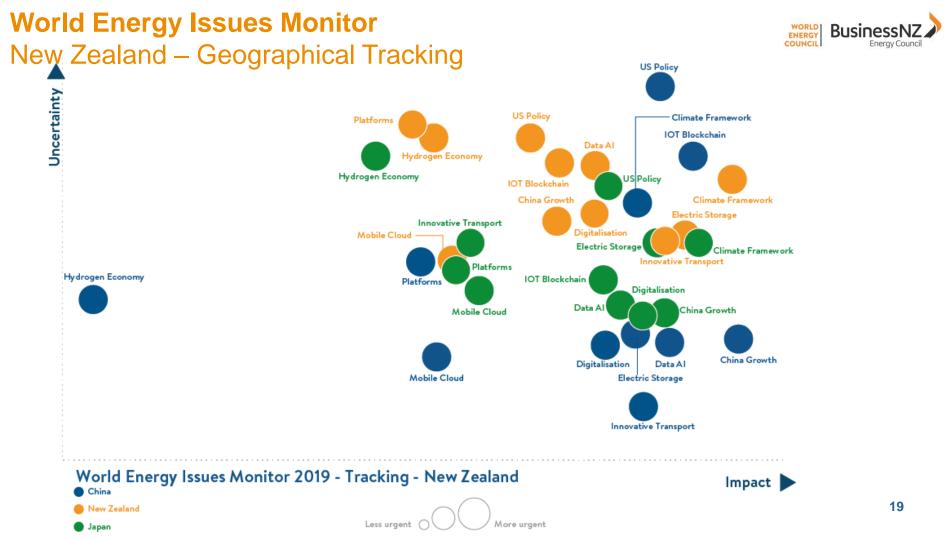
Less urgent O More urgent

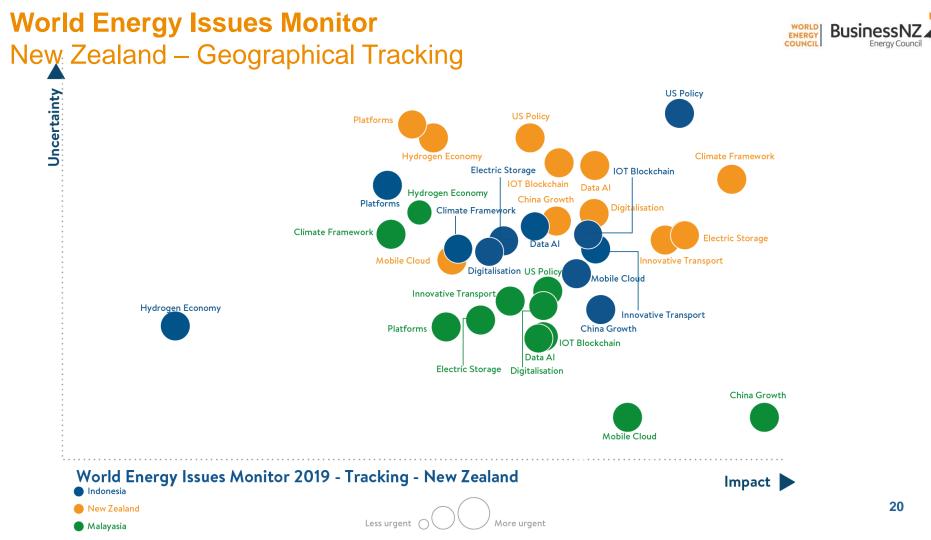




World Energy Issues Monitor New Zealand – Geographical Tracking

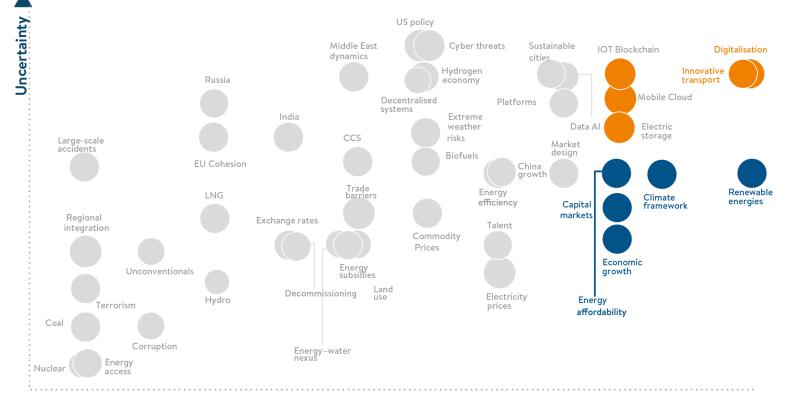






World Energy Issues Monitor New Zealand – Future Energy Leaders





World Energy Issues Monitor 2019 - New Zealand - FELs

Critical uncertainties: what keeps energy leaders awake at night

Action priorities: what keeps energy leaders busy at work

Less urgent O More urgent

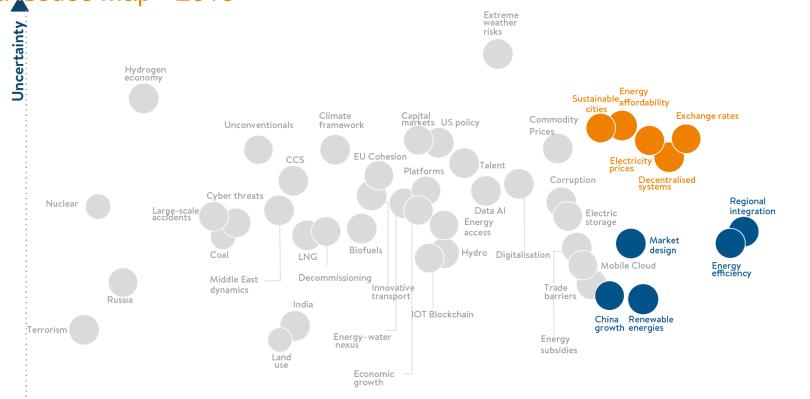




REGIONAL

World Energy Issues Monitor Africa Issues Map - 2019





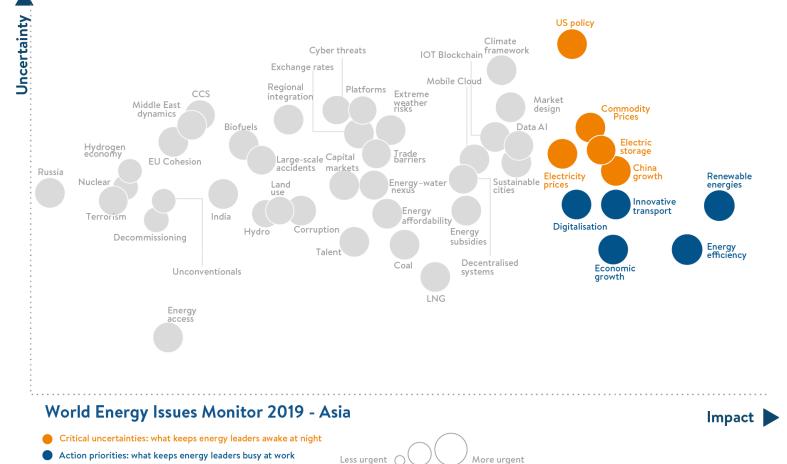
World Energy Issues Monitor 2019 - Africa

- Critical uncertainties: what keeps energy leaders awake at night
- Action priorities: what keeps energy leaders busy at work





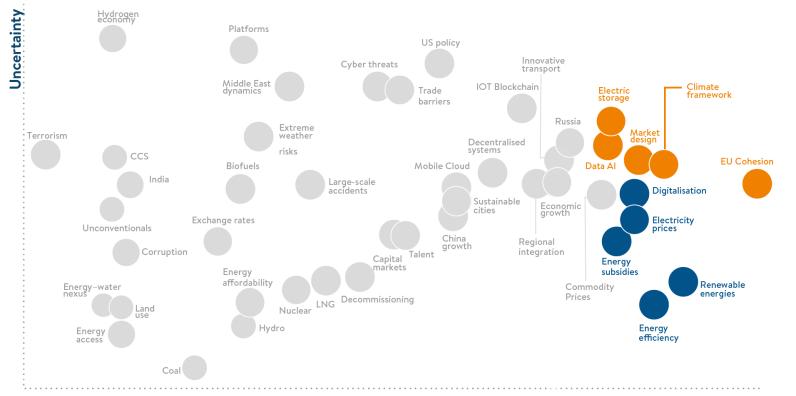
World Energy Issues Monitor Asia Issues Map - 2019





World Energy Issues Monitor Europe Issues Map - 2019





World Energy Issues Monitor 2019 - Europe

Critical uncertainties: what keeps energy leaders awake at night

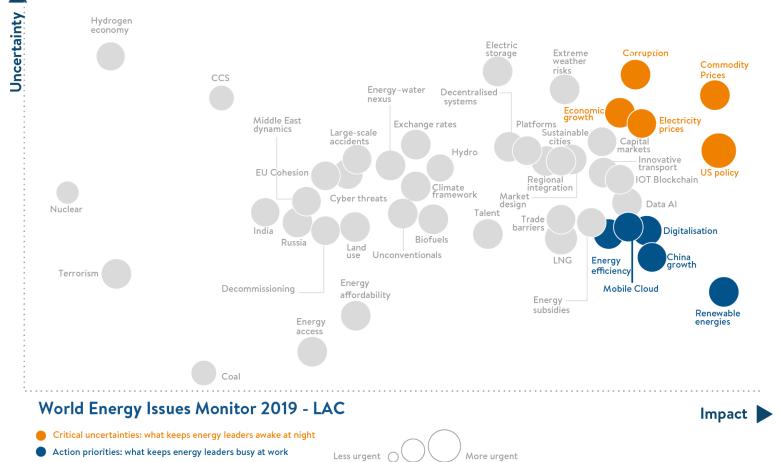
Action priorities: what keeps energy leaders busy at work





World Energy Issues Monitor LAC Issues Map - 2019

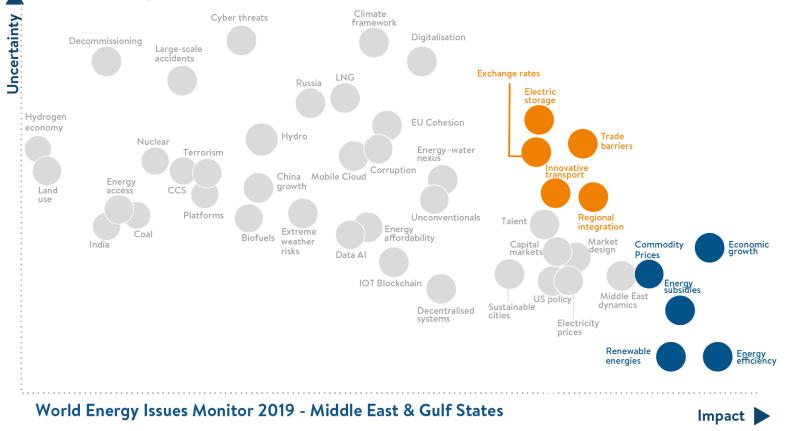




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World Energy Issues Monitor MEGS Issues Map - 2019



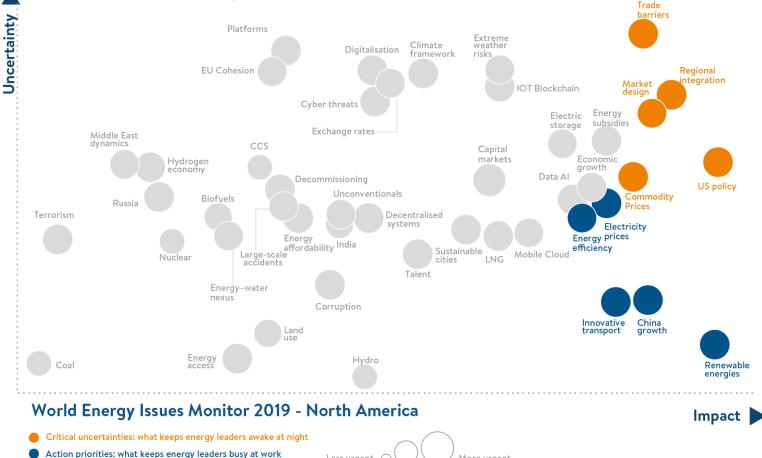


- Critical uncertainties: what keeps energy leaders awake at night
- Action priorities: what keeps energy leaders busy at work



World Energy Issues Monitor North America Issues Map - 2019





Less urgent

More urgent

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Thank you

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