WORLD ENERGY COUNCIL

2022 WORLD ENERGY ISSUES MONITOR

ENERGY IN UPROAR - ACHIEVING COMMITMENTS THROUGH COMMUNITY ACTION

ABOUT

WORLD ENERGY COUNCIL

The World Energy Council is the world's principal independent and impartial network of energy leaders and practitioners, promoting an affordable, stable and environmentally sensitive energy system for the greatest benefit of all.

Formed in 1923, the Council is the premier global energy body, representing the entire energy spectrum, with over 3,000 member organisations in over 90 countries, drawn from governments, private and state corporations, academia, NGOs and energy stakeholders. We inform global, regional and national energy strategies by hosting high-level events including the World Energy Congress and publishing authoritative studies and work through our extensive member network to facilitate the world's energy policy dialogue.

Further details at www.worldenergy.org and @WECouncil

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WORLD ENERGY ISSUES MONITOR 2022

The World Energy Issues Monitor provides a snapshot of what keeps CEOs, Ministers and experts awake at night in nearly 100 countries.

The Monitor helps to define the world energy agenda and its evolution over time. It provides a high-level perception of what constitute issues of critical uncertainty, in contrast to those that require immediate action or act as developing signals for the future. It is an essential tool for understanding the complex and uncertain environment in which energy leaders must operate, and a tool through which one can challenge one's own assumptions on the key drivers within the energy landscape.

This 13th iteration of the World Energy Issues Monitor is based on insights of nearly 2,200 energy leaders in 91 countries to provide 51 national assessments across six world regions.

In addition to this report, the Interactive Issues Monitor Online Tool allows the visualisation of the data that underpins the Issues Maps. This tool has been produced in conjunction with the Council´s project partner, Arup

World Energy Issues Monitor 2022, published by the World Energy Council.

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FOREWORD

A compelling case for community action and enhanced energy literacy

This year's World Energy Issues Monitor reflects enormous uncertainty about the best way to manage climate change as we recover from the COVID-19 crisis, in an environment of rising energy costs. Undertaken in the weeks immediately following the COP 26 Conference in Glasgow in late 2021, our survey also highlights shared concerns about the rise of national interests in the face of climate change – a red signal for humanity.

Energy matters are centre stage in a world of more digitally connected, politically contested, interdependent, and diverse energy societies. Leadership agendas are focussed on the complex coordination challenges of managing faster-paced global energy transitions, without triggering new threats to regional and global peace.

In parts of the world many of the issues addressed in this publication have manifested themselves in the form of public uproar, notably around energy prices, costs and affordability as well as climate management.

Better solutions in energy for people and planet are possible, but not simple. They require new models of human and economic development and a shift from incremental improvements to transformation strategies that work across borders, across sectors, involve all levels of society, and deal with more than one issue at a time.

The search for more creative, integrated and inclusive solutions also presents new challenges in accountability and accounting. How to measure and manage the 'true and whole' costs of changes to the global energy system; for example, tackle subsidies, internalise externalities, address scope 3 emissions?

A highly dynamic energy landscape is emerging, characterised by new 'energy ecosystem' coalition building and competitions. In the void of an effective global energy governance system, the tension in energy interests of networks and territories are unresolved. Resilience extends to people and supply chains, with the fragile and lean nature of the latter severely tested in 2021. Rewiring for resilience requires new multi-directional flows and capacity buffers, both of which carry a cost.

This years' 25th World Energy Congress: Energy for Humanity will provide an opportunity to address these big, uncomfortable leadership questions. A better quality of conversation and action plans cannot be achieved by overlooking the increasing diversity in energy in the broadest sense – technologies, geographies, pathways and solutions. Achieving impact requires involving more people and communities

Humanising energy is our imperative.

The world cannot wait for full consensus, nor for intelligent machines to deliver the answer. The next big thing in energy is not a moon-shot technology but 1000s of smaller steps that mobilise sufficient critical mass and accelerate human-centric know-how in securing quality energy access for all.

A step change in energy literacy is essential to mobilise voices, clarify choices, hold leaders to account, and in sharing learning about how to move forward faster and together. Managing the inherent societal disruption in energy technology transition benefits from better understanding about the role of prices – including both carbon and energy – in guiding energy transitions along multiple pathways in all regions

And, *lest we forget*, how prices are inherently linked to systems costs, affordability, taxation and equity

We hope this publication will stimulate conversations big and small, nationally and internationally, to accelerate energy transitions and put people at the heart of the global energy agenda.

Dr Angela Wilkinson
Secretary General & CEO
World Energy Council

ABOUT THE WORLD ENERGY ISSUES MONITOR

The World Energy Council has been tracking energy leaders' perspectives on the issues affecting the sector over the past 13 years through the annual World Energy Issues Monitor. By asking policy makers, CEOs and leading industry experts to assess the level of impact and uncertainty they attribute to preidentified energy transition issues, the Monitor provides a unique overview of: a) the Action Priorities or areas where countries are acting pragmatically to progress in their energy transition; and b) the Critical Uncertainties or issues that are in the energy leaders' radar as areas of concern, and how these have evolved over time.

For this edition of the World Energy Issues Monitor, the Council surveyed nearly 2,200 energy leaders and global experts drawn from across the Council's global network of close to 100 national Member Committees. The survey was conducted over the three weeks following the conclusion of the 26th Conference of the Parties (COP26), which was held in Glasgow, UK during November 2021. The 2022 World Energy Issues Monitor should be considered within this context.

The Issues Monitor Survey questionnaire considers 25 core energy transition issues, which are divided into 5 categories:

1. **Global Trends and Macroeconomics,** including geopolitics, economic growth, regional integration and commodity prices;
2. **Environment,** including climate change, energy efficiency, resource availability and the circular economy;
3. **Energy Technologies,** including hydrogen, renewables, nuclear, electric storage, digitalisation and cybersecurity;
4. **Policy and Business,** including market design, trade and investment;
5. **Social Dynamics,** including demand-side impact, energy access and equity.

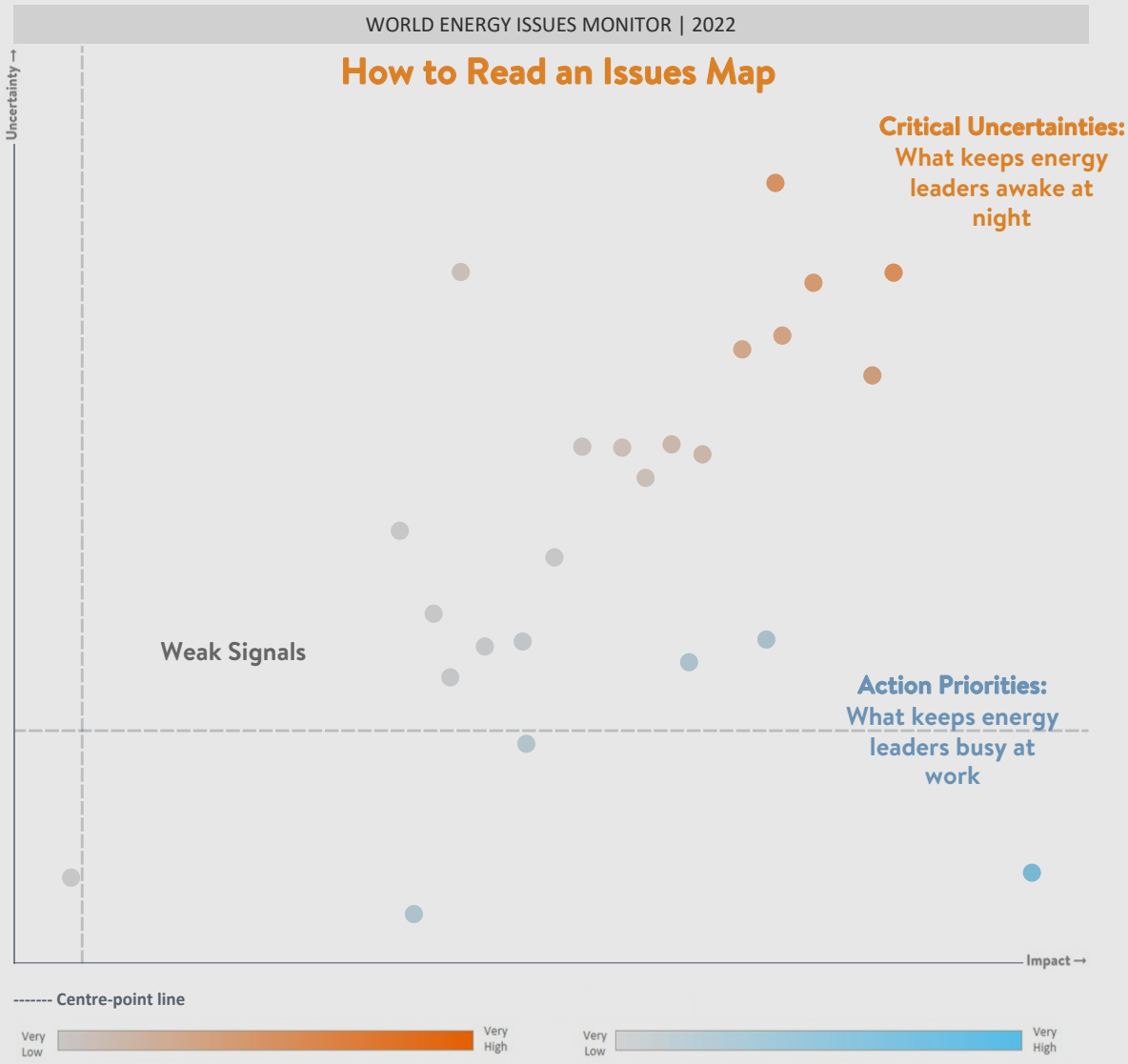
The bubbles in the Issues Map represent the **averaged level of: a) uncertainty; and b) impact** that respondents attribute to each energy transition issue. Those issues in the top right-hand corner of the map highlighted in **orange** have the highest levels of impact and uncertainty, and are defined as **Critical Uncertainties.** The bottom right-hand corner of the map highlights issues in **blue** that have high impact, but low uncertainty, and are defined as **Action Priorities.** The centre-point of the issues map represents the medium level for impact and uncertainty to help comparison between different issues maps.

This year we have introduced **colour shades,** which are graded according to proximity to the right-hand corners of the maps. This enables finer differentiation of the degree of uncertainty and impact attributed to issues, and to highlight (lighter shades) issues that are close to becoming Critical Uncertainties and Action Priorities.

The Issues Monitor is widely used by the World Energy Council's Member Committees and by the global energy community as a reality check tool that provides a horizon-scanning of perspectives on energy transitions from a country's own energy stakeholders. This energy insiders' perspective, which is presented in the report through the Issues Maps, in combination with the respective commentaries has, over the years, informed decision-making discussions by:

- Promoting a shared understanding of successful energy transitions;
- Understanding how energy transitions are perceived by sector stakeholders in relation to countries' national and regional energy strategies;
- Appreciating and contrasting regional variations to better understand differing priorities and areas of concern;
- Following the evolution of specific economic, social, technology, political, business and environmental trends related to the energy sector.

Figure 1: How to Read an Issues Map



We know that there is no one-size-fits all approach to energy transition and that there are multiple energy transition pathways. We also acknowledge that diversity in energy systems has increased enormously over the past 50 years and that individual country/region energy contexts vary greatly. For example, Latin America is deploying significant hydropower resources, whilst Asia still utilises a high proportion of coal for power generation. In Europe, more nuclear and renewable energy feature in the energy mix. The starting points for different regions are very different, and so are the politics, economies and regimens, all of which need to be taken into consideration.

By aggregating responses by countries, regions and globally, the Issues Maps provides visual representation of this diversity of needs and priorities and is used globally to inform business and policy decision-making – a true energy transition tool.

The latest releases associated with the World Energy Issues Monitor 2022 can be found at: https://www.worldenergy.org/publications

AN ONLINE, INTERACTIVE MAPPING TOOL

The region and country-level Issues Maps are also available on the Issues Monitor online tool which provides scope to develop individual customised maps. The interactive Issues Monitor online tool, produced in conjunction with our project partner, Arup, can be found at: http://www.im.worldenergy.org

GLOBAL PERSPECTIVES

2021 was a pivotal year for energy transitions. The impact of the COVID-19 pandemic continues to overshadow global economies, and the pathway to recovery remains uncertain. Following a 4.5% drop in global energy demand in 2020 – the largest ever absolute decline – energy demand rebounded during 2021 as COVID restrictions were lifted and economies recovered. However, successive waves of the pandemic, driven by viral variants and uneven global vaccine roll outs, mean that the outlook for energy demand remains highly uncertain through 2021 and 2022. Although some permanent destruction of demand may continue in some places, rebound growth in demand of between 4 and 5% has been predicted, pushing global energy use to above pre-COVID-19 levels.

The delayed Conference of the Parties – COP26 – was held in Glasgow during November 2021, where the package of decisions taken by nations included strengthened efforts to build resilience to climate change, curb greenhouse gas emissions and provide finance solutions to achieve these objectives.

For the first time, nations were called upon to phase down unabated coal power and inefficient subsidies for fossil fuels.

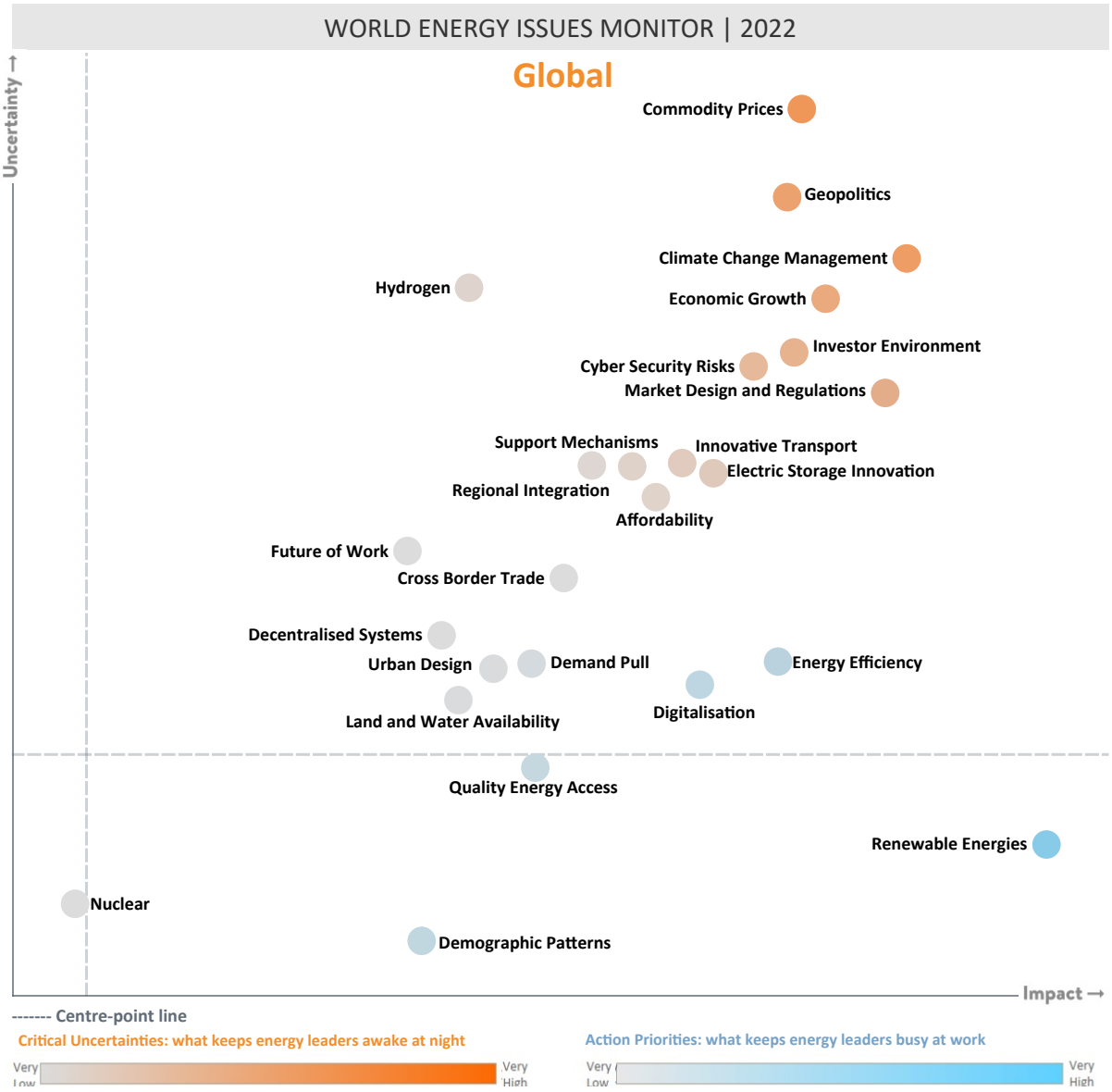
COP26 PLEDGES

- Over 130 countries agreed to end and reverse deforestation by 2030.
- More than 40 countries agreed to phase out their use of coal power.
- In excess of 100 countries joined the Global Methane Pledge.
- More than 137 countries committed to reducing emissions to net zero by 2050.
- The US and China – the two largest emitters of CO2 – agreed to work together on climate change.
- More than 40 world leaders agreed to a plan led by the UK to speed up affordable, clean technology by 2030, including zero-emission vehicles.

This annual edition of the World Energy Issues Monitor Survey was undertaken immediately following COP26 and represents a snapshot in time of the views of nearly 2,200 energy leaders from 91 countries. It is the largest survey of its kind of senior energy professionals, governments and civil society. Now in its 13th edition, it provides a horizon-scanning tool of the major trends in energy-related developments and gives unique insight into what energy leaders perceived as the risks, opportunities and action priorities at a pivotal moment for the sector as it seeks to transition away from carbon-based fuels.

So, against this backdrop, what is keeping energy leaders busy at work (**Action Priorities**) and what is keeping them awake at night (**Critical Uncertainties**)?

Figure 2: 2022 Global Energy Issues Map

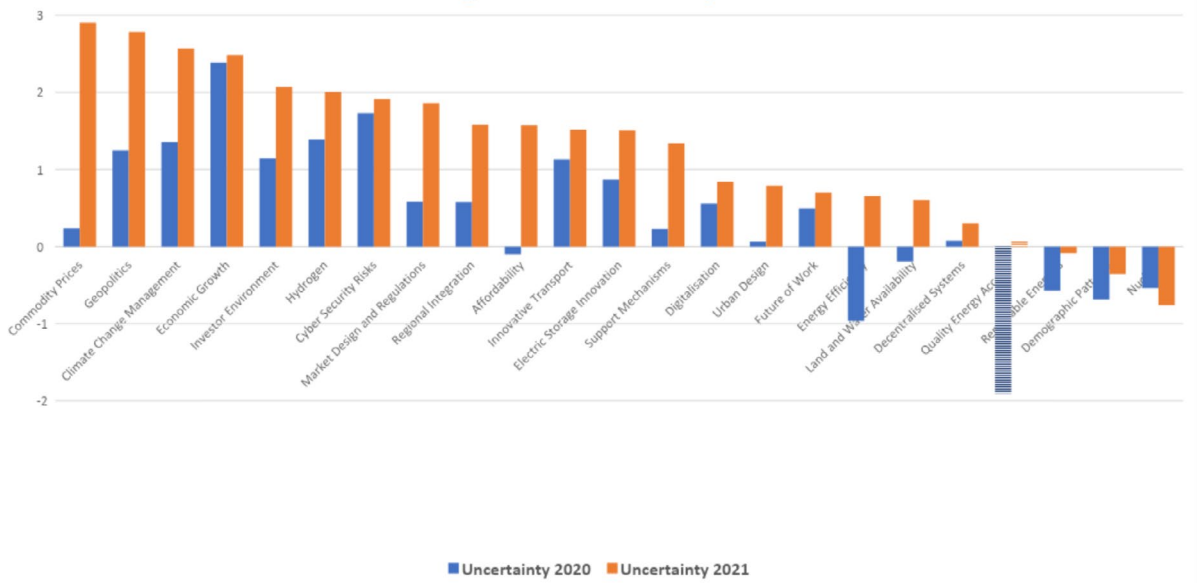


1. UNCERTAINTIES INCREASE AGAIN, ACROSS THE BOARD

The most striking finding of this year's Global Energy Issues Map is the enormous degree of uncertainty ascribed to almost all the issues energy leaders were asked to assess. Very few issues cross into the action priorities domain, indicating that clear focus and priority setting is difficult. Refocusing will be required to re-establish clear priorities for energy transition.

In the first year of the pandemic, all issues showed a significant increase in uncertainty, and although this upward trajectory might have been expected to decrease with the loosening of pandemic restrictions and the re-opening of global trade, instead, this year's Issues Map indicates a further ratcheting up of uncertainty (Figure 3).

Figure 3: Time Tracking Global Uncertainty 2020-2021



*In the 2021 survey, the issue "(basic) Energy Access" was replaced with "Quality Energy Access" to include productive uses of energy.

Economic Growth continues to concern global energy leaders, with the route out of the disruption caused by the COVID-19 pandemic far from certain. The COVID-19 health emergency has accentuated existing social challenges (e.g., growth in wealth discrepancies, uneven economic impacts) and had a short-term material impact on global, regional, and national productivity. This has in turn generated the need for short term government "fixes" e.g., furlough and other measures. There has been a significant boost to government spending, but in many countries that spending has not been directed towards the climate-friendly innovative solutions called for by the "build back better" agenda. It is inevitable that these short-term measures will have a longer-term impact on investments in energy transitions, climate mitigation and adaptation and other essential sustainability efforts. The full long-term implications of the pandemic are likely to have aftereffects and reverberations for some time to come.

The COVID-19 emergency has both accelerated and delayed aspects of societal change. The positive and negative effects of digitalisation have been radically accelerated. New lifestyles and forms of working have quickly evolved. Regrettably, the "digital divide" has been widened. Access to information, a major enabler of lifestyle and quality of life, remains highly unequal. The role of energy as a driver of digitalisation remains under-estimated by many.

In 2020, the World Energy Council developed four COVID Scenarios to explore plausible paths as the world emerges from the pandemic – **Pause, Rewind, Fast-Forward** and **Re-Record.** Taking into account this continued increase in uncertainty, a Pause Scenario which anticipates a return to a pre-pandemic normal seems increasingly unlikely.[1] Rather, we see the emergence of diverse paths bringing some Fast-Forward elements of collaborative opportunities for collaboration, but also Re-Record signals of bottom-up initiatives to create human-centred transitions.

In this context, **Commodity Prices** appears as the clearest critical uncertainty globally and across all regions, with the exception of North America, where **Climate Change Management** heads the list (see Regional Highlights below). Uncertainty relating to **Commodity Prices** has increased sharply globally compared with 2021, with particularly large rises in North America and Europe compared with 2020. Record price increases in natural gas, particularly in UK and Europe, driven by shortages and bottlenecks to

[1]The Council will be undertaking further work with its Scenario team to update its long-term Scenarios to support the global strategic dialogue on the future of energy systems. These will be released at the 25th World Energy Congress in October 2022.

to supply are contributing to the climate of uncertainty. The volatility in global, regional, and national energy markets has been widely reported by the media and by international energy institutions with energy data aggregation roles. The dramatic swings in Brent and West Texas Intermediate (WTI) crude prices, two key markers, speak for themselves. Northern European and Asian gas markets have also entered new territory in both absolute terms as well as volatility-wise.

The implications of this tremendous oscillation in commodities markets are profound and not yet fully understood. What is clear is that investment decisions in major energy projects have been impacted. The World Energy Council stated in its 2021 World Energy Issues Monitor that an "underinvestment shock" was likely. The Council continues to hold this view.

The **Geopolitics** of energy routinely scores highly on the critical uncertainty list, but this year, the impact attributed to this issue is substantially higher at a global level than in 2020. This higher impact score reflects the perceptions of big energy players such as the US, China and Russia along with their relative weighting in the global results.[2] Additionally, countries continued energy interdependence on one another, despite record growth in renewable capacity, trade tensions, and the pressures placed on global leaders by the pandemic contribute to keeping **Geopolitics** firmly on the uncertainty agenda.

Perceptions on **Climate Change Management** suggest that countries have come away from COP26 with less certainty about the climate challenge. At COP26, nations reaffirmed their duty to fulfil their pledge of making US$100 billion available annually from developed nations to developing countries to tackle the effects of climate change. And they collectively agreed to work to reduce the gap between existing emission reduction plans and what is actually required to restrict the rise in global average temperature to 1.5 degrees. Although pledges were agreed, defined next steps on how to deliver these are still unclear.

This **uncertainty cluster**, at the top right corner of the 2022 Global Energy Issues Map, provides a snapshot of the complex environment of interconnected challenges where energy leaders operate. This complexity is a result of the influence each issue has on the others. And the complexity is amplified by the diversity of local conditions. It is difficult to aspire for a global consensus on transition pathways when the "how-to-get-there" directions are not the same for everybody. With these lenses of complexity and diversity, the real challenge becomes how to get all the different actors from energy and adjacent sectors around the table, with all their varying circumstances and perspectives, to be able to better navigate the energy transitions challenge together.

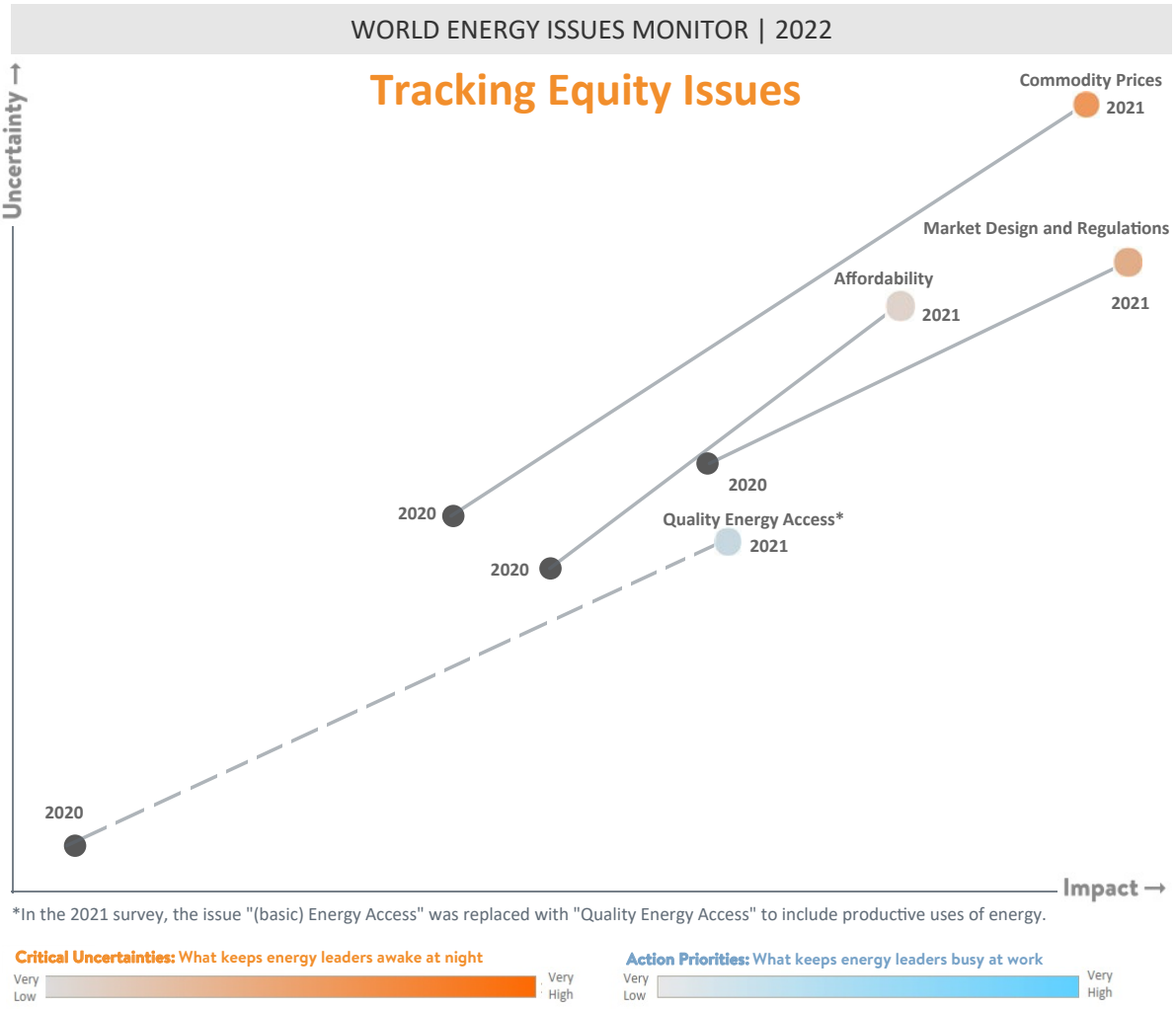
2. EQUITY-RELATED CONCERNS HIGHLIGHT THE NEED TO HUMANISE THE ENERGY CONVERSATION

In this survey iteration, issues that affect energy equity[3] such as **Commodity Prices, Affordability, Quality Energy Access** and **Market Design** have seen the sharpest increase in impact and uncertainty compared with 2020.

[2] In order to avoid any bias from under or over representation, Regional and Global results are calculated using a weighted average of country results to reflect their relative role in the energy system. Weights are defined based on countries':
a) energy consumption,
b) energy production,
c) national income per capita
Issues' scores reflect a weighted average of countries' scores.

[3] The Energy Equity dimension in the World Energy Trilemma Index assesses a country's ability to provide universal access to reliable, affordable and abundant energy for domestic and commercial use. The dimension captures basic access to electricity and clean cooking fuels and technologies, access to prosperity-enabling levels of energy consumption and affordability of electricity, gas and fuel.

Figure 4: Tracking Equity Issues



Market Design is a World Energy Issue Monitor question area. Whilst appearing a technical matter, it has a profound effect on the nature of the energy business. Over the past year, we have seen a number of dramatic market failures. The UK residential energy market is a good example where numerous newcomers to the market have become insolvent, some almost overnight. There are significant lessons to be learned from these economic failures, and the societal impacts could be profound given government/state resources have been required to offer “fixes”.

Also worth noting that **Basic Energy Access** was already perceived in 2020 with higher uncertainty and impact due to the pandemic. This year, the replacement of Basic Energy Access in the Issues Survey with **Quality Energy Access** – defined as the availability of sufficient, safe and reliable energy supply, which can enable prosperous modern livelihoods – has given the energy access issue greater prominence in all regions, placing it in the global Action Priority area of the map for the first time. This ‘Quality’ criteria raises new questions about what it means to have the access to energy required to promote people and livelihoods and humanises the language around energy transition.

In times of crisis, what affects people the most is **uncertainty around what is essential.** In order to humanise energy, we must be able to foresee crises and understand the points of greatest impact when a crisis takes place. This must be a key learning from our global response to the pandemic and, in an energy context, we must build in **Equity Resilience** so that future crises can be managed with lower social and economic impact across all regions and geographies.

3. PRIORITY IS TO WORK COLLABORATIVELY TO TURN CRITICAL UNCERTAINTIES INTO ACTION PRIORITIES

Renewable energies continue to be a long-standing Action Priority as the energy sector implements established technologies and integrates them within the energy system. This year, **Renewable Energies** consolidate their position at the top of the Action Priority agenda.

Energy leaders also highlight **Demographic Patterns** as an Action Priority, albeit, according to it a lower overall level of uncertainty than in 2021. This Action Priority is highly geo-specific. Regions with rising urban, young populations and concurrent increasing energy demand accord this a higher priority than regions with aging populations and flat or declining demand.

Still, the fact that the Action Priorities area of the map is even less populated this year compared to previous years points to an energy leaders' perspective which signals the importance of **stabilising Critical Uncertainties** and finding practical ways to reach a point of greater confidence – There is too high a degree of uncertainty across all dimensions to allow for stable route mapping which, in turn risks leading to further inaction. This must be resolved swiftly.

COP26 and the World Energy Council's own World Energy Week held in October 2021 revealed a stark contrast between the possible responses to the global energy transition challenges. We saw the elites of international finance attend Glasgow with a united voice, particularly around the need for enhanced Environmental, Social and Governance reporting. Leaders at COP26 have put questions back on the agenda, but clear **pathways to achieve the Paris Goals** are yet not apparent.

There is a need to explore the **drivers of change in uncertainty and their wider impact**, and we hope that this report opens up the dialogue and leads to actions. Some Conversation Starters around the critical questions can be found in the box below.

CONVERSATION STARTERS

- What can help to resolve Critical Uncertainties and turn more issues into **Action Priorities**?
- What alliances and collaborations are required to mitigate risks posed by such a high degree of uncertainty?
- How can **Climate Change Management** be shifted into the action priority domain?
- What is the interplay between **Geopolitics, Climate Change Management** and **Commodity Prices**?
- How can uncertainty in **Commodity Prices** be managed in the short and medium term?
- How can investments in Digitalisation, Renewable Energies and Energy Efficiency impact **quality energy access**?
- How can we use **Scenarios** to structure conversations around Critical Uncertainties?
- What does **Equity Resilience** look like?

REGIONAL PERSPECTIVES

For 2022, emerging findings for **Action Priorities** and **Critical Uncertainties** will be tested with the Council's regional energy communities in digital workshops to be held during February 2022. Further context and detail will be added to each of the region's energy landscapes and reported on during Q1 2022.

The comparison of common and unique uncertainties and priorities for each region, and the highlights from the survey results, provide initial insights on the regional energy leaders' perspectives from this survey iteration.

CRITICAL UNCERTAINTIES ACROSS REGIONS

(WHAT IS KEEPING ENERGY LEADERS AWAKE AT NIGHT – FROM HIGHEST TO LOWEST SCORES)

AFRICA

Commodity Prices
Economic Growth
Geopolitics
Regional Integration
Climate Change Mngmt

ASIA

Commodity Prices
Climate Change Mngmt
Geopolitics
Economic Growth
Hydrogen

EUROPE

Commodity Prices
Geopolitics
Climate Change Mngmt
Market Design
Investor Environment

LAC

Economic Growth
Commodity Prices
Climate Change Mngmt
Investor Environment
Market Design

MEGS

Commodity Prices
Economic Growth
Geopolitics
Climate Change Mngmt
Innovative Transport

NORTH AMERICA

Climate Change Mngmt
Cyber Security Risks
Market Design
Investor Environment
Affordability

UNIQUE REGIONAL ISSUES

- **Africa:** Regional Integration
- **Asia:** Hydrogen
- **MEGS:** Innovative Transport
- **North America:** Cyber Security Risks and Affordability

FREQUENT OCCURRING ACROSS SEVERAL REGIONS

- Commodity Prices
- Economic Growth
- Geopolitics
- Climate Change Management
- Market Design
- Investor Environment

ACTION PRIORITIES ACROSS REGIONS

(WHAT IS KEEPING ENERGY LEADERS BUSY AT WORK – FROM HIGHEST TO LOWEST SCORES)

AFRICA

- Renewable Energies
- Digitalisation
- Demographic Patterns
- Energy Efficiency
- Market Design

ASIA

- Renewable Energies
- Digitalisation
- Demographic Patterns
- Quality Energy Access
- Demand Pull

EUROPE

- Renewable Energies
- Digitalisation
- Energy Efficiency
- Demographic Patterns
- Quality Energy Access

LAC

- Renewable Energies
- Energy Efficiency
- Demand Pull
- Urban Design
- Quality Energy Access

MEGS

- Renewable Energies
- Energy Efficiency
- Demographic Patterns
- Land & Water Availability
- Quality Energy Access

NORTH AMERICA

- Renewable Energies
- Demographic Patterns
- Energy Efficiency
- Quality Energy Access
- Digitalisation

COMMON TO ALL REGIONS

- Renewable Energies

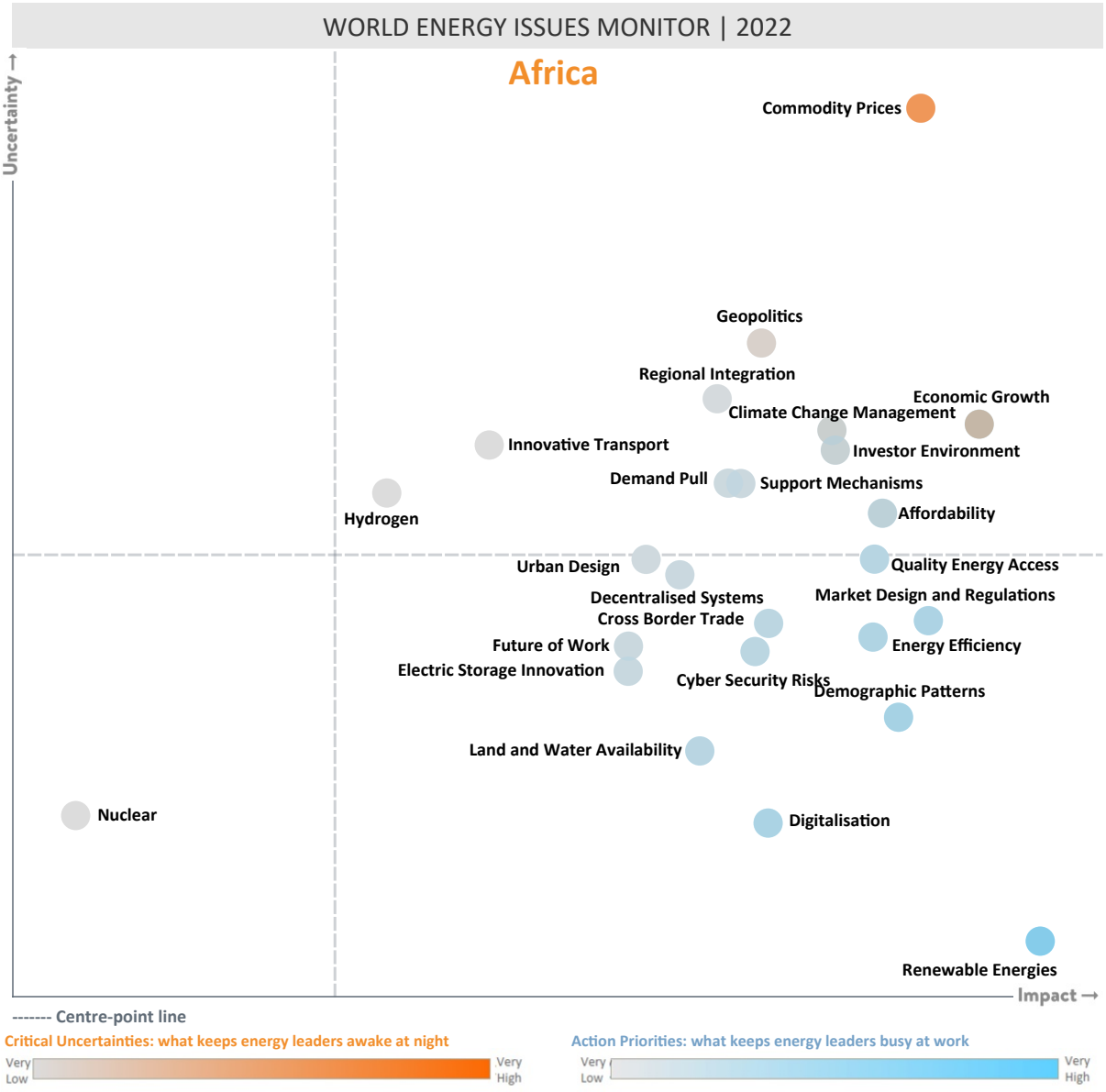
UNIQUE REGIONAL ISSUES

- **Africa:** Market Design
- **LAC:** Urban Design
- **MEGS:** Land and Water Availability

FREQUENT OCCURRING ACROSS SEVERAL REGIONS

- Digitalisation
- Demographic Patterns
- Energy Efficiency
- Quality Energy Access
- Demand Pull

AFRICA



As with all regions, excluding the North America region, **Commodity Prices** are the most critical uncertainty, dominating the Africa Issues map. The remaining issues are clustered in the high impact, lower uncertainty area around the centre point line of the map with no clear distinction of priorities.

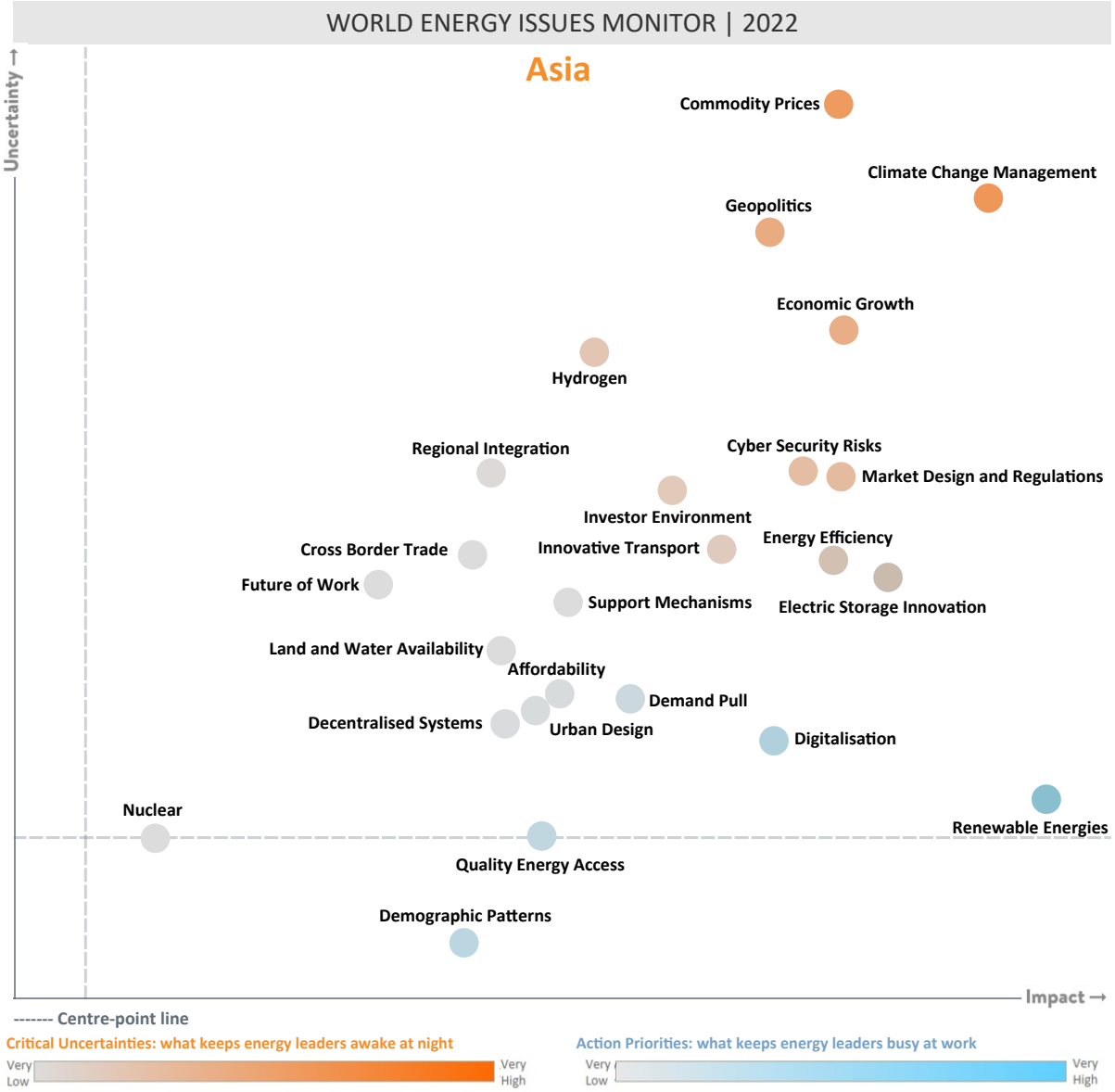
Consistent with the global map, **Renewable Energies** remain a stable Action Priority, with impact and uncertainty accorded similar scores to 2021.

Digitalisation is a notable mover when compared with 2021, moving into the Action Priority agenda, whilst **Decentralised Systems** have moved in the other direction, assuming greater levels of uncertainty and decreasing in impact. **Nuclear** appears to have fallen out of the picture, dropping down in impact and uncertainty compared with 2021.

CONVERSATION STARTERS

- What are the specific challenges in the year ahead in the regional **energy context**? (Prompts: fuel price hikes, security and gas crises, fiscal crisis, social unrest, and equity.)
- What is the interplay between **Geopolitics, Climate Change Management** and **Commodity Prices**?
- What does a focus on **Digitalisation** as an Action Priority look like across the region?
- Compared with other regions, issues are perceived with **lower uncertainty** – What is this due to?
- Surprisingly **Quality Energy Access** is not particularly high on the uncertainty axis – What lies behind this assessment?
- Similarly, **Climate Change** is perceived with lower impact than other regions – What is the context?
- What has changed in a **Climate Change Management** context post COP26?
- What progress has been made on the **African Union's Agenda 2063 for** a just energy transition?

ASIA



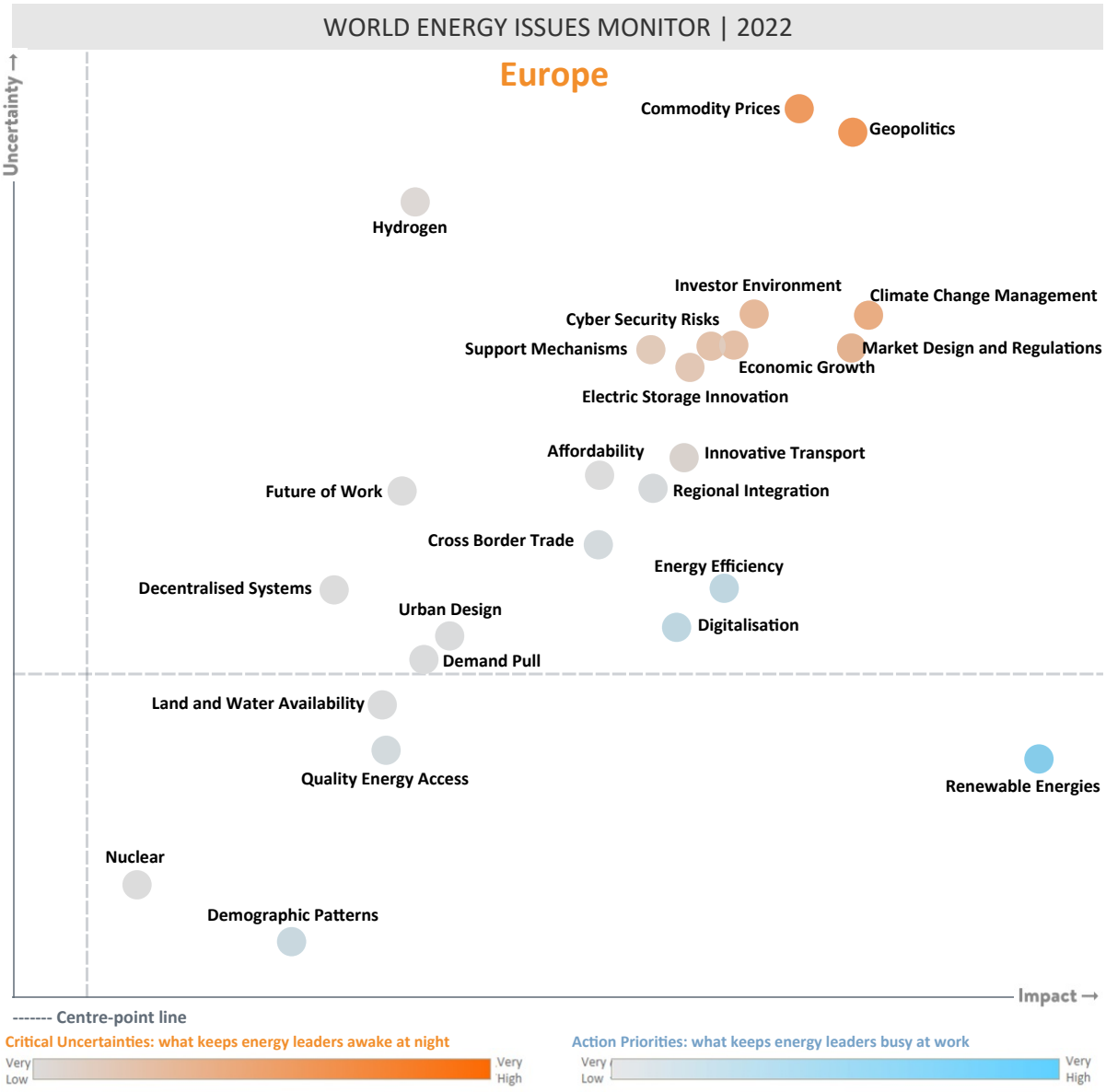
Consistency is the theme across Asia, with the 2022 Issues Map remaining remarkably constant between 2021 and 2022. **Commodity Prices** and **Geopolitics** stand out as the Critical Uncertainties, with the region strongly impacted by energy security concerns and large price rises in energy costs. **Hydrogen** scores highly on the Critical Uncertainties axis and is accorded more interest than many other regions.

Quality Energy Access is perceived as a regional Action Priority, but **Affordability** is not perceived as a significant issue. **Demographic Patterns** also fall into the Action Priority agenda, but are perceived to be decreasing in impact.

CONVERSATION STARTERS

- What are the specific challenges in the year ahead in the regional **energy context**? (Prompts: fuel price hikes, security and gas crises, fiscal crisis, social unrest, and equity.)
- What can help to **resolve Critical Uncertainties** and turn more issues into **Action Priorities**?
- What has changed in a **Climate Change Management** context post **COP26**?
- What is the interplay between **Geopolitics, Climate Change Management** and **Commodity Prices**?
- What are the aspirations for **Hydrogen**?
- **Geopolitics** assumed greater importance in 2022 – Is this global or regional, or both?
- What actions around **Quality Energy Access** are being taken?
- What progress is being made in reducing the impact of **Demographic Patterns**?

EUROPE



Following the global trend, there is an increase in uncertainty across most issues, with **Commodity Prices** and **Geopolitics** standing out as the region's Critical Uncertainties. These are strongly influenced by energy security concerns and significant price hikes, particularly in gas prices, being experienced across Europe.

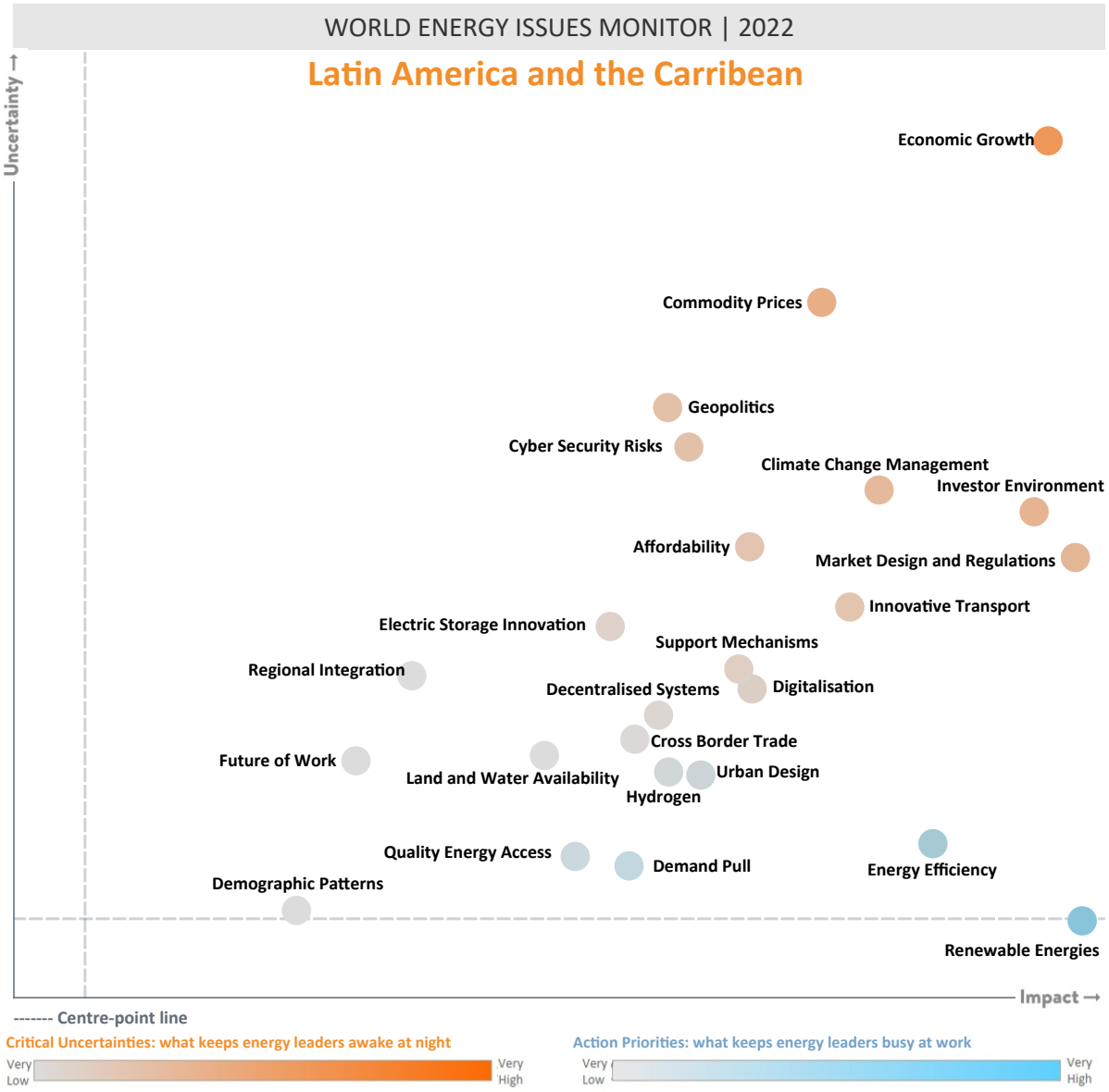
Hydrogen continues to be viewed with a high degree of uncertainty, and it will be interesting to follow progress on this issue as it forms a key part of the EU's Green Deal climate neutrality goals. **Nuclear** also appears on the Action Priority horizon – are there opportunities ahead?

Renewable Energies continue to be a focus for Action Priority across the continent, whilst **Quality Energy Access** assumes greater uncertainty as the pandemic continues to impact working patterns and transport.

CONVERSATION STARTERS

- What are the specific challenges in the year ahead in the regional **energy context**? (Prompts: fuel price hikes, security and gas crises, fiscal crisis, social unrest, and equity.)
- What is the answer to Europe's **energy insecurity**?
- What is the interplay between **Geopolitics, Climate Change Management** and **Commodity Prices**?
- What does **Quality Energy Access** look like in a European context?
- What has changed in a **Climate Change Management** context post **COP26**?
- How is the EU **Hydrogen** strategy impacting the region?
- Are there opportunities ahead for **Nuclear**?

LATIN AMERICA AND THE CARIBBEAN



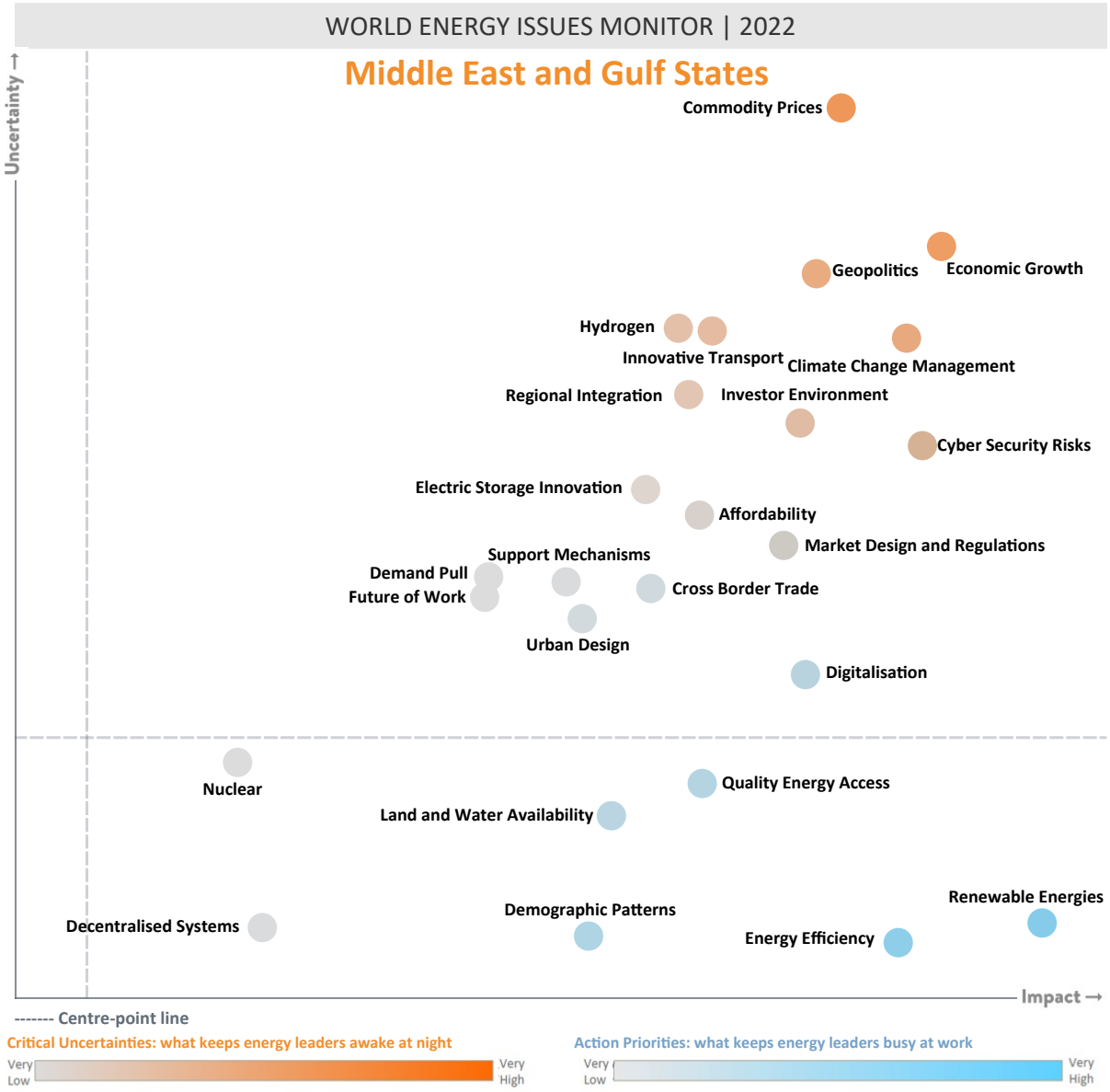
Showing analogous responses to Africa, the Latin America and Caribbean region reports clustering of all issues in the high impact area of the map, along with higher uncertainty. The map is striking in its depiction of no clear distinction of priorities. No issues fall into the Action Priorities quadrant.

The priority for the region must be clear leadership and pathways back to Action, with **Economic Growth** being deemed the highest priority.

CONVERSATION STARTERS

- What are the specific challenges in the year ahead in the regional **energy context**? (Prompts: fuel price hikes, security and gas crises, fiscal crisis, social unrest, and equity.)
- What is the interplay between **Geopolitics, Climate Change Management** and **Commodity Prices**?
- How is the high degree of uncertainty, particularly with respect to **Economic Growth** impacting **Quality Energy Access, Security of Supply, Affordability** and **Climate Change Management**?
- What is the region's response to **COP26 pledges**?
- What support is required to shift Critical Uncertainties back to an **agenda of Action Priorities**?
- What can be done to support the **Investor Environment** in the region?

MIDDLE EAST & GULF STATES



The Middle East and Gulf States continue to be aligned with the overall global Issues Map, with higher uncertainty overall and **Commodity Prices and Geopolitics** rising up from Action Priorities to Critical Uncertainties.

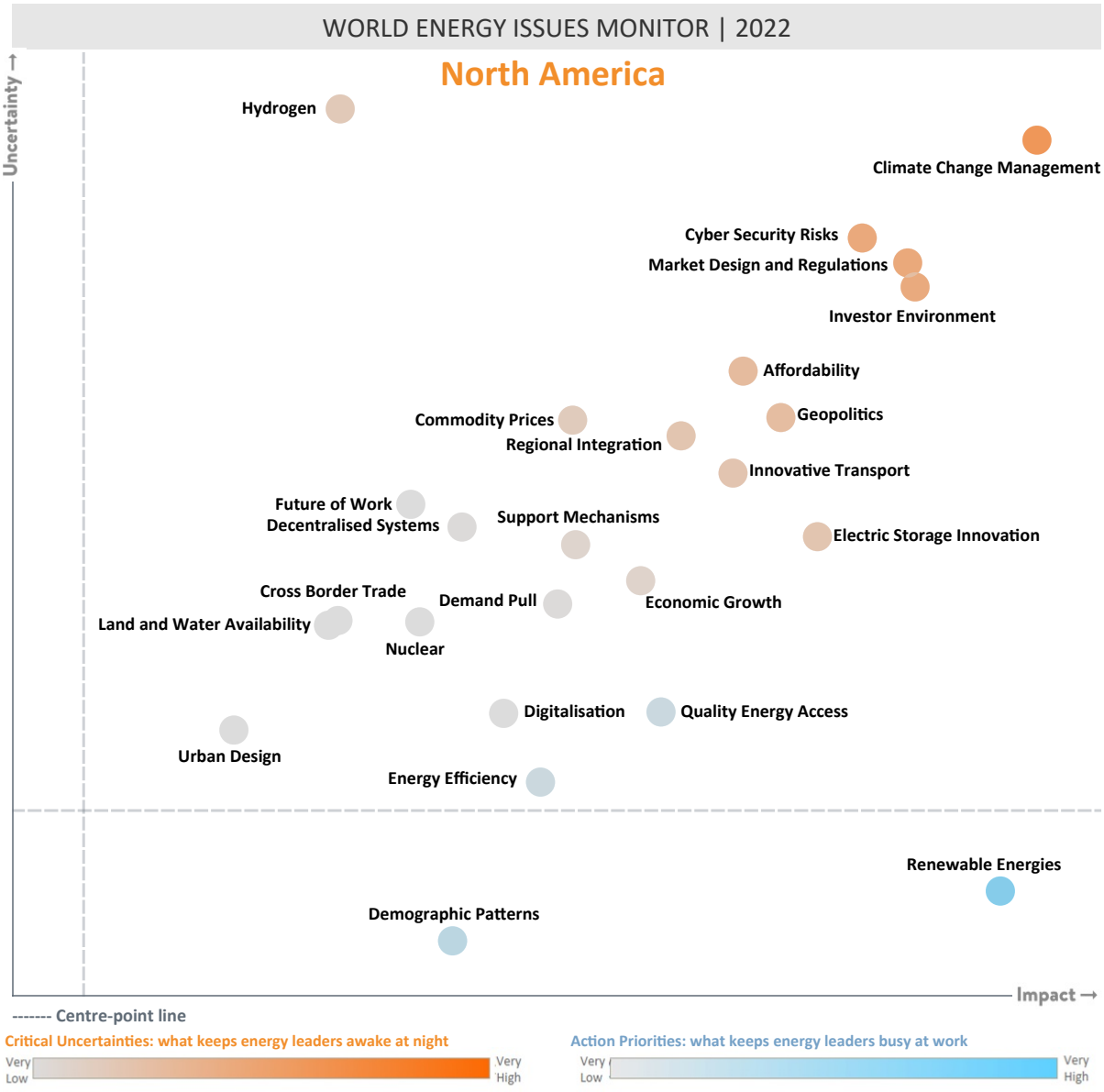
Commodity Prices top the list of **Critical Uncertainties,** closely followed by **Economic Growth** and **Geopolitics,** which show enormous shifts over their relative 2021 position. **Hydrogen** also increases up the uncertainty axis.

Renewable Energies, Energy Efficiency and **Land and Water Availability** remain Action Priorities as consistent factors in the region's energy transition strategy.

CONVERSATION STARTERS

- What are the specific challenges in the year ahead in the regional **energy context**? (Prompts: fuel price hikes, security and gas crises, fiscal crisis, social unrest, and equity.)
- How has the region's **diversification strategy** progressed in 2021?
- What is the interplay between **Geopolitics, Climate Change Management** and **Commodity Prices**?
- Where is the region on the recovery pathway to **Economic Growth**?
- What progress has been made with respect to **Hydrogen** and **Nuclear**?
- **Land and Water Availability** continue to be a focus in a resource-constrained region – What advances have been made?
- What is the region's response to **COP26 pledges**?
- **Geopolitics** continues to be challenging – What are the risk mitigation strategies?

NORTH AMERICA



The North America Issues Map bucks the global trend – attributing the highest degree of impact and uncertainty to **Climate Change Management**, with **Commodity Prices** seemingly less of an issue than across the rest of the world. But uncertainty remains high, with the region following the global pattern of clustering uncertainty and few clear Action Priorities.

Hydrogen makes an appearance as a critical issue, moving from low to high uncertainty compared with the 2021 map, and **Renewable Energies** remain as a defined Action Priority, with the degree of uncertainty reducing over the past year.

CONVERSATION STARTERS

- What are the specific challenges in the year ahead in the regional **energy context**? (Prompts: fuel price hikes, security and gas crises, fiscal crisis, social unrest, and equity.)
- Has the Biden administration made an impact in **Climate Change Management** across the region?
- What is the region's response to **COP26 pledges**?
- What is the interplay between **Geopolitics, Climate Change Management** and **Commodity Prices**?
- What is the role of **Hydrogen** in energy diversification in the region?
- What gains can be made in **Energy Efficiency** and should this be a target for action?
- **Demographic** patterns continue to be an Action Priority – What does this look like?

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