WORLD ENERGY COUNCIL

WORLD ENERGY PULSE: CLIMATE, COVID AND CONFLICT IMPLICATIONS AND OUTLOOKS

WORLD ENERGY PULSE RESULTS | APRIL 2022

TRACKING THE IMPACT OF MULTIPLE CRISES: EXPERIENCES AND OUTLOOK FROM THE WORLD ENERGY COMMUNITY

The world is reeling from global energy shocks triggered by the convergence of crises: climate change, covid, and conflict.

The interaction of these crises has cascading and uneven impacts in energy which are felt at all levels of society. As leaders seek to step up to meet these crises, responses reflect different experiences and expectations.

This brief presents a quick "pulse" of current attitudes and trends felt across the industry and provides global and regional perspectives of crises implications and transformational actions.

Findings are based on responses to the World Energy Pulse received during the first half of April 2022.

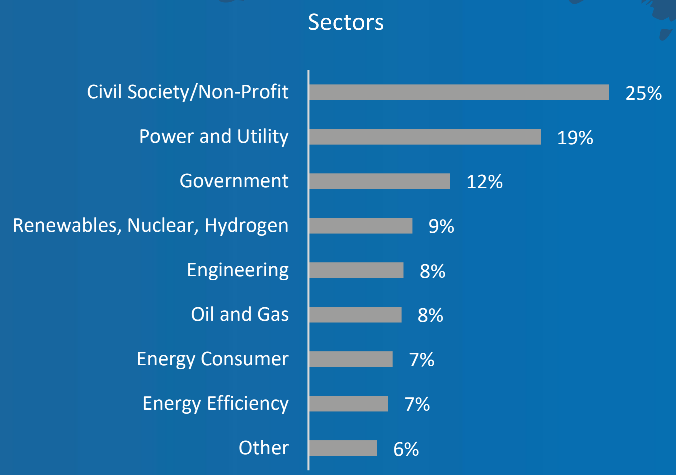
To inform the World Energy Community and enable real-time decision-making amid a fast-changing situation, World Energy Pulses will be taken at regular intervals over the coming months.

Should you wish to access to more detailed data and insights, please contact us at partners@worldenergy.org

696 RESPONDENTS

ACROSS 6 REGIONS AND

87 COUNTRIES



EXECUTIVE SUMMARY | DIVERSE DISRUPTIONS

1. CLIMATE AND CONFLICT COMPETE FOR LEADERSHIP ATTENTION. Europe's energy security crisis and the global climate crisis dominate the world's energy leadership attention. Fortunately, many (46%) energy leaders recognise the importance of maintaining a balance among all three World Energy Trilemma dimensions – energy security, sustainability, and affordability – as a short-term priority. The significance of impact of the COVID 19 pandemic has diminished globally, except in Africa and Asia where it is still seen as a leading concern.

2. INCREASING PACE OF ENERGY TRANSITIONS. Over 50% of global respondents expect faster transitions as a result of the multiple crises. This view is more prevalent for respondents from Asia, Europe and North America.

3. GLOBAL, LONG-TERM DISRUPTION. Over 80% of global respondents have signalled direct and/or indirect impacts from the European energy security crisis on their countries' energy supply chains. The same share of respondents expect disruption to affect energy markets in the long term or permanently, with 25% showing no confidence of a return to pre-crises conditions.

4. HIGHER EXPECTATION OF GOVERNMENT INTERVENTION. A staggering 86% of global respondents indicate near-universal agreement that governments must intervene to address price shocks and affordability impacts on energy users, despite most respondents indicating very limited government action has been taken to address energy security and affordability to date.

5. LOCAL SOLUTIONS TO LOCAL PROBLEMS. Investing in diversification of the energy mix is seen as paramount to addressing energy security and affordability concerns globally, and almost all regions agree that a new electricity market design is needed. Restoring coal and nuclear power generation is a consideration across Europe and Asia, while the introduction of wholesale market prices caps has been discussed in the Latin America and Caribbean region.

6. A CHANGING INVESTMENT LANDSCAPE. Energy supply diversification has focused highly on renewables, but oil and gas investment has picked up in a shift from the divestment of recent years. Energy efficiency is by far the first choice to manage demand. Investment in energy storage and infrastructure is balanced and diversified across a range of options, signalling this is being treated as an action priority globally.

7. WHO CAN LEAD IN A MORE FRAGMENTED WORLD? The declining trend of globalisation is giving rise to local and regional security priorities. Leadership on transition is seen as "top down", with governments, inter-governmental agencies and large corporations still perceived as best equipped to enable transitions while bottom-up leadership models are regarded a smaller role.

1 | CLIMATE AND CONFLICT COMPETE FOR LEADERSHIP ATTENTION

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Europe's energy security crisis and the global climate crisis are the leading energy concerns globally

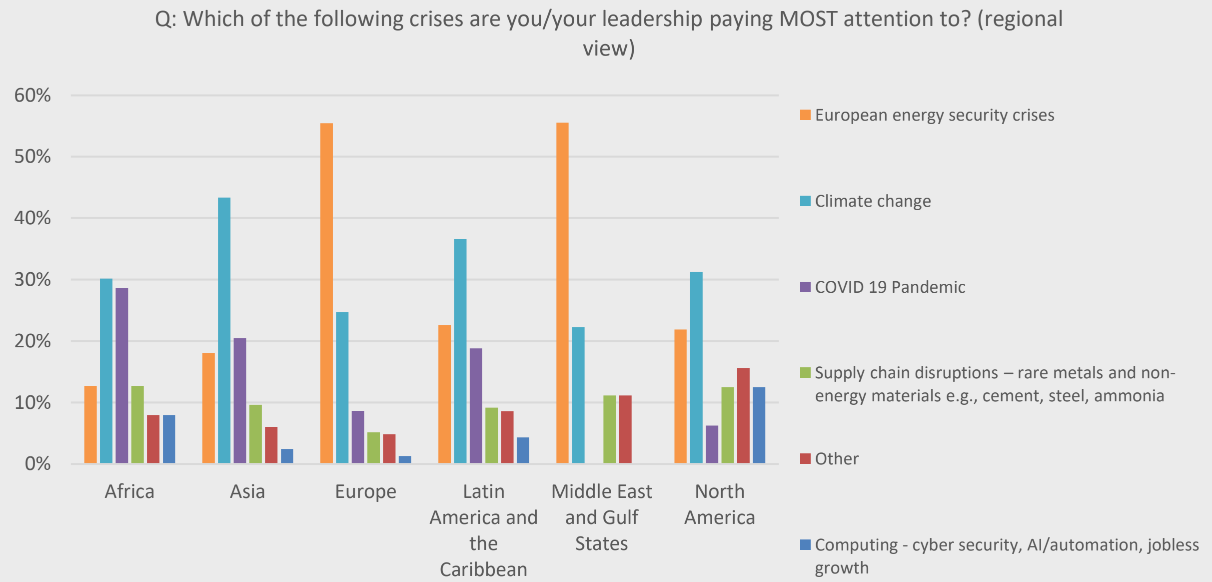
__Europe's energy security crisis__ and __global climate change__ dominate the world's leadership attention (67%), with the former being the biggest concern particularly for respondents from Europe and the Middle East and Gulf States.

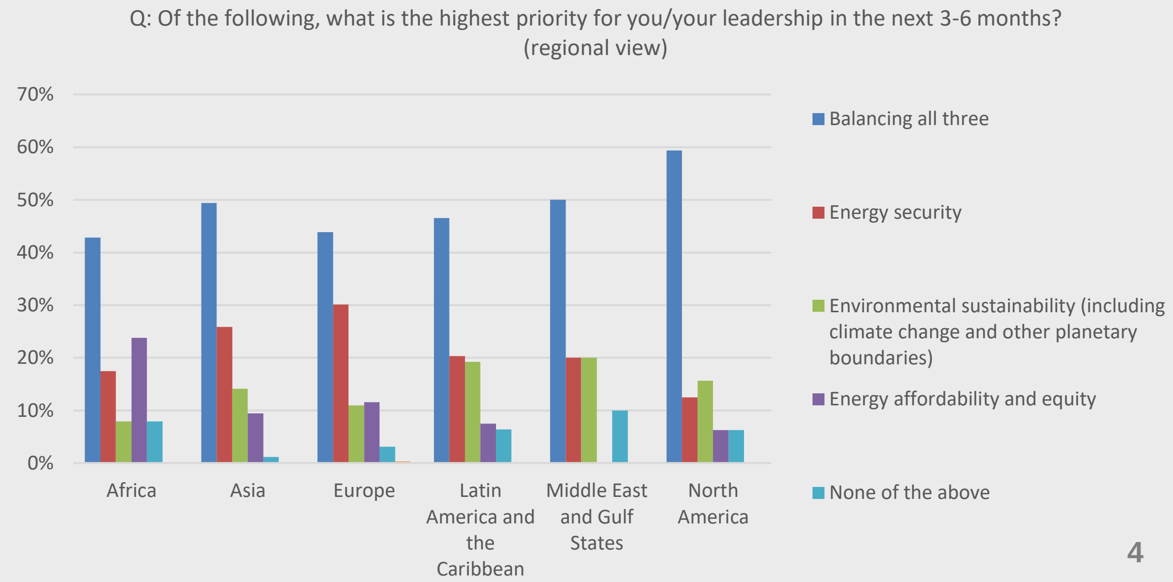
The __COVID 19 pandemic__ is overall perceived with lower priority across regions, especially in Europe (9%), the Middle East and Gulf States (0%), and North America (6%), where it is seen as a significantly low priority. Africa and Asia are exceptions, where climate change and the pandemic are higher priorities.

In times of crisis, balancing the three dimensions of the World Energy Trilemma is a global short-term priority

Globally, 46% of respondents recognise the need to __balance all three World Energy Trilemma dimensions__ as the top priority. __Energy security__ is the biggest individual concern globally, with 25% of respondents identifying it as the highest priority.

Interestingly, only respondents from the Africa region cite energy affordability and equity as the highest individual short-term concern.





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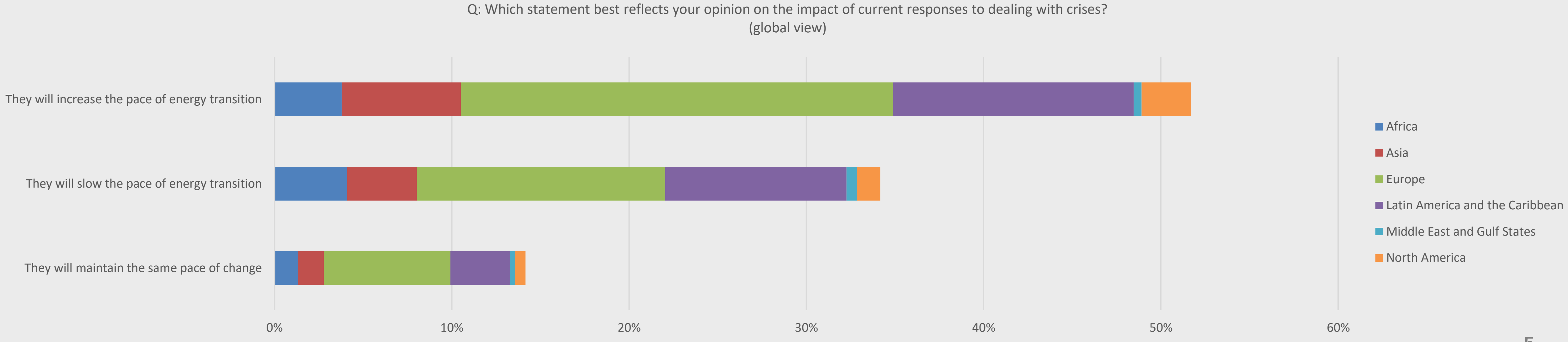
2 | INCREASING PACE OF ENERGY TRANSITIONS

Converging crises are expected to increase the pace of energy transitions, but views differ across regions

*Over 50% of global respondents expect **faster energy transitions** as a result of the responses to multiple crises.*

*From a regional perspective, this view is more prevalent for respondents from **Asia, Europe, and North America**.*

*Respondents from the **Africa, Latin America and the Caribbean, and the Middle East and Gulf States** regions are split, with diverging views that transitions will be either accelerated or slowed.*



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3 | GLOBAL, LONG-TERM DISRUPTION

The energy security crisis in Europe has had substantial impacts globally

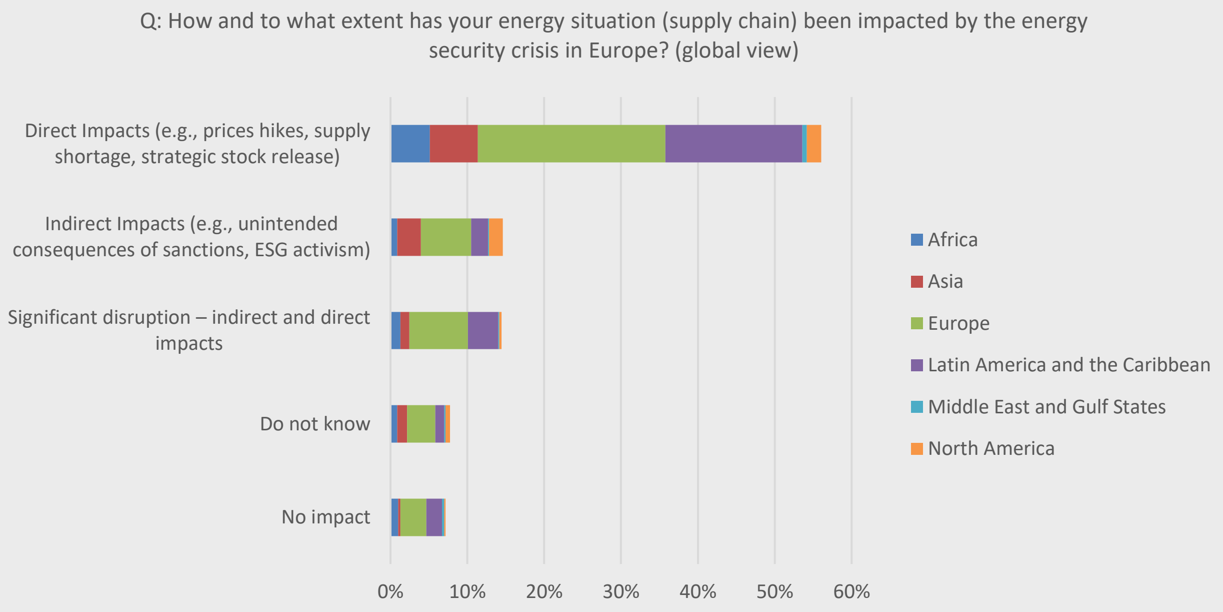
*Over 50% of respondents have seen a direct impact on energy supply chains, including **price hikes, supply shortage and release of strategic stocks**.*

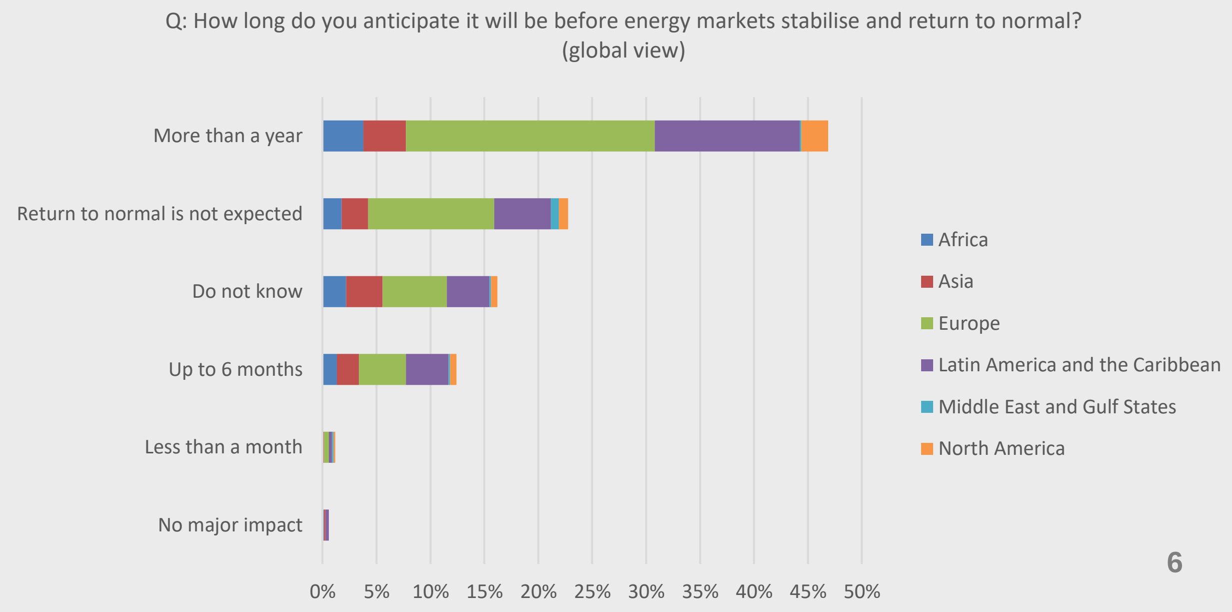
15% of respondents indicated indirect impacts on their energy situation.

Recovery is not anticipated anytime soon

*46% of global respondents agree that **it will take over one year for energy markets to stabilise**.*

*Another 40% of respondents either do not expect a **return to normal** or feel unable to put any timeline on the recovery path.*





4 | HIGHER EXPECTATION OF GOVERNMENT INTERVENTION

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Global views of affordability as an unaddressed concern

Only 21% of respondents consider that their countries have substantially addressed energy security and affordability in strategic planning of net-zero goals, which indicates a ***possible gap in preparedness*** *towards meeting these challenges.*

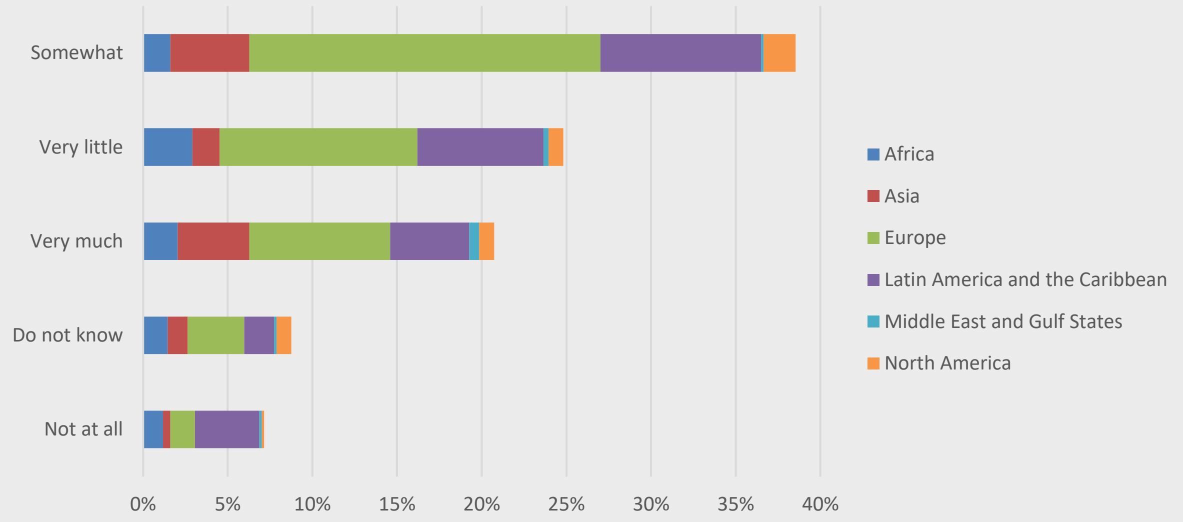
Most respondents indicate that some or very little attention has been paid to *energy security and affordability by governments, indicating a perception that a* ***medium to low priority is currently assigned to these issues****.*

There is near-universal agreement on the need for government intervention to protect energy users, but a new approach is required

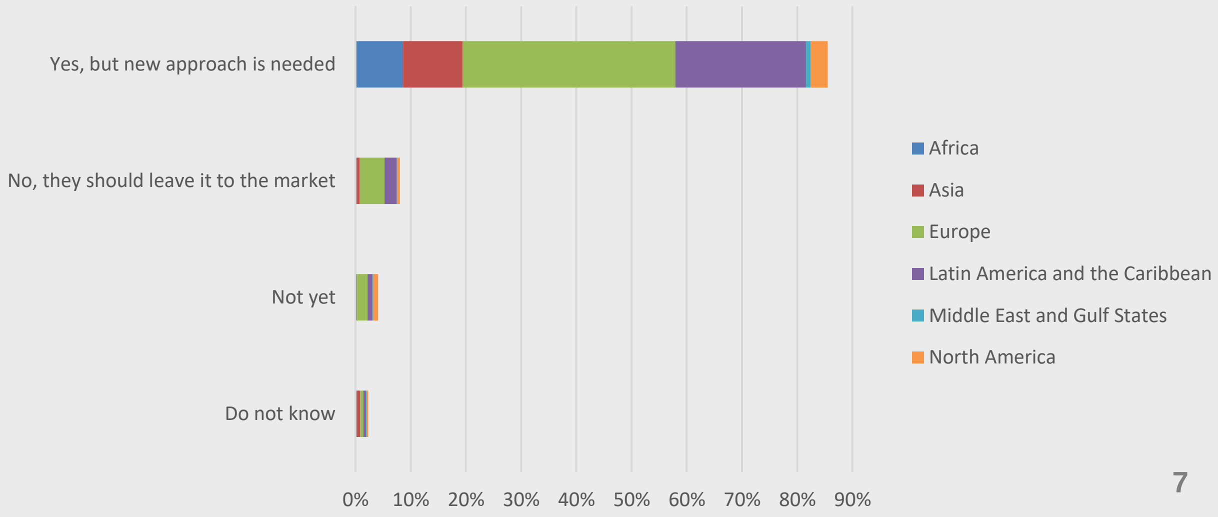
A staggering 86% of global respondents indicate ***near-universal agreement that governments must intervene*** *to address price shocks and affordability impacts on energy users.*

The view comes with the addendum that ***a new approach is needed*** *for success to be achieved.*

Q: Has your country included energy security and affordability in developing its net zero goals and plans? (global view)



Q: Do governments need to intervene to protect energy users from price shocks and address affordability concerns? (global view)



5 | LOCAL SOLUTIONS TO LOCAL PROBLEMS

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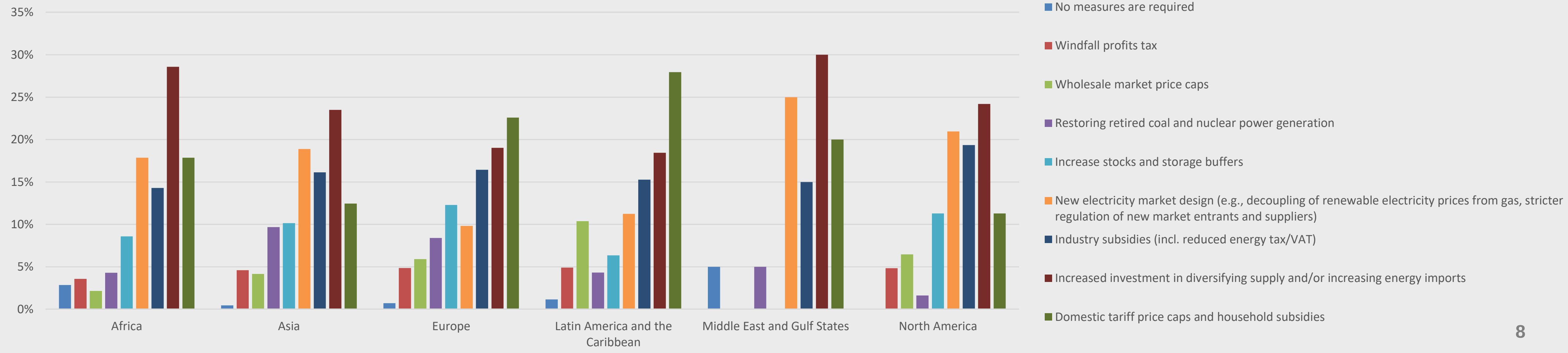
Affordability and security solutions vary considerably by region

*Investing in **diversification of the energy mix** is seen as paramount to addressing energy security and affordability concerns globally.*

*While **traditional responses** including industry and consumer subsidies and regulatory changes are seen as commonly used options by governments to address security and affordability concerns, **other tools are increasingly being used across regions** such as restoring coal and nuclear power generation for Europe and Asia or introducing wholesale market prices for Latin America and the Caribbean.*

Q: Which of these measures are being used in your country to address new energy security and affordability concerns? (regional view)



6 | A CHANGING INVESTMENT LANDSCAPE

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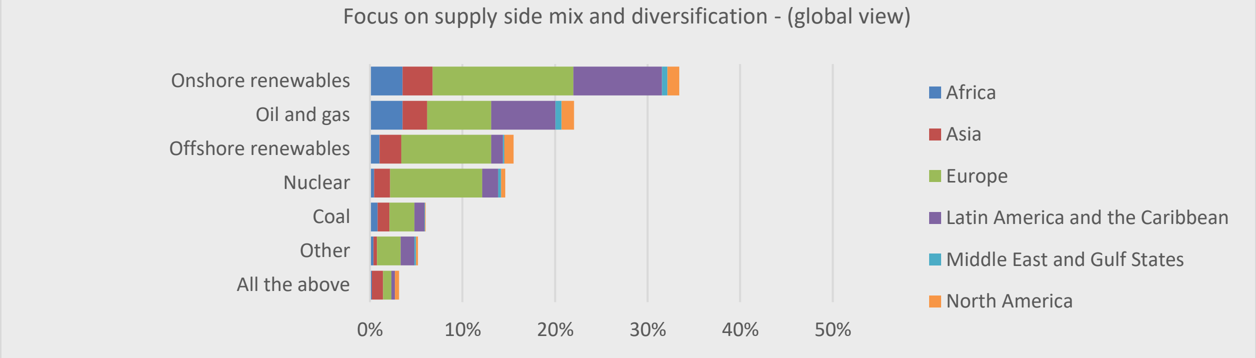
Q: How is investment being reallocated in your country in response to new energy security, price, and affordability concerns?

Renewables drive supply diversification, but oil and gas investment picks up

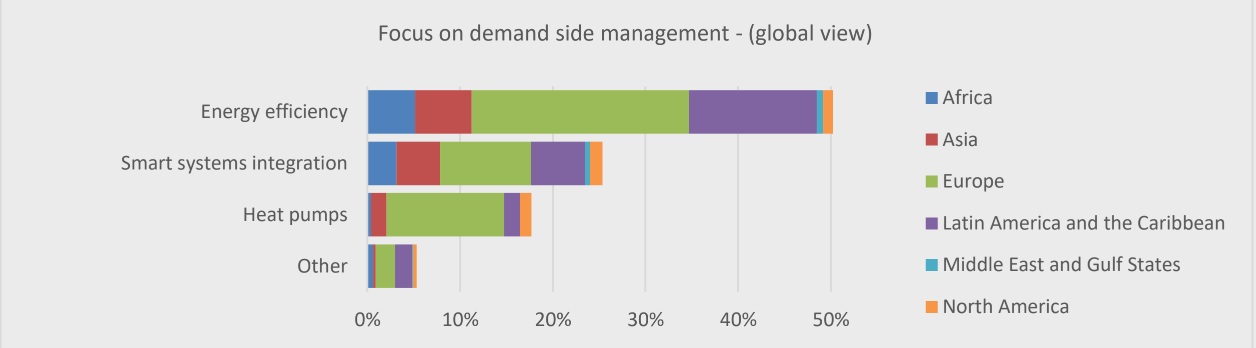
Onshore and offshore renewables *account for much of the largest share of investment reallocation and energy mix diversification in response to energy security, price, and affordability concerns.*

Oil and gas *is also highlighted as a priority investment destination, which may suggest a shift in gear from the divestment of the past few years.*



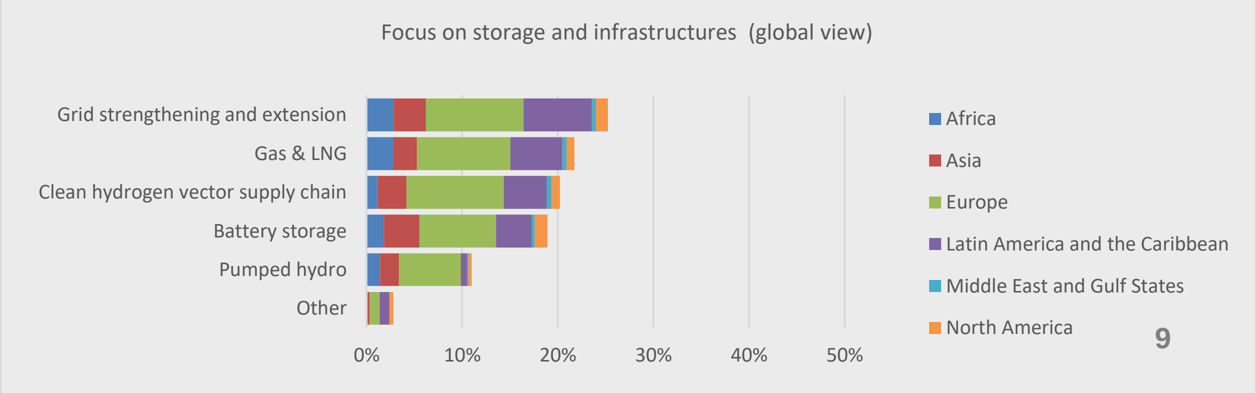
Investment in energy efficiency to manage the demand side

Energy efficiency *is by far the first choice for investment reallocation to manage the demand side in response to energy security, price, and affordability concerns.*



Energy storage and infrastructure is a global action priority

Investment in energy storage and infrastructure is balanced and diversified across a range of options, signalling this is being treated as an ***action priority across all regions.***



7 | WHO CAN LEAD IN A MORE FRAGMENTED WORLD?

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The declining trend of globalisation and rise of local and regional security priorities

Less than a quarter of respondents see continued globalisation, *with most expecting a bi-polar or more fragmented world.*

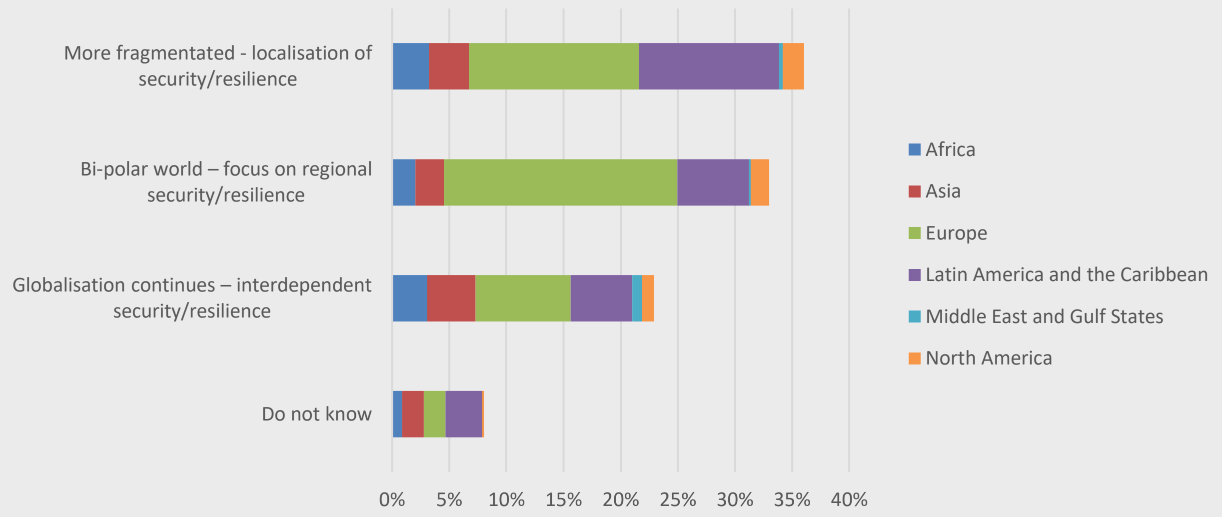
Most respondents expect countries to seek ***energy security and resilience*** *through regional or national action.*

Leadership on transition currently looks very "top down"

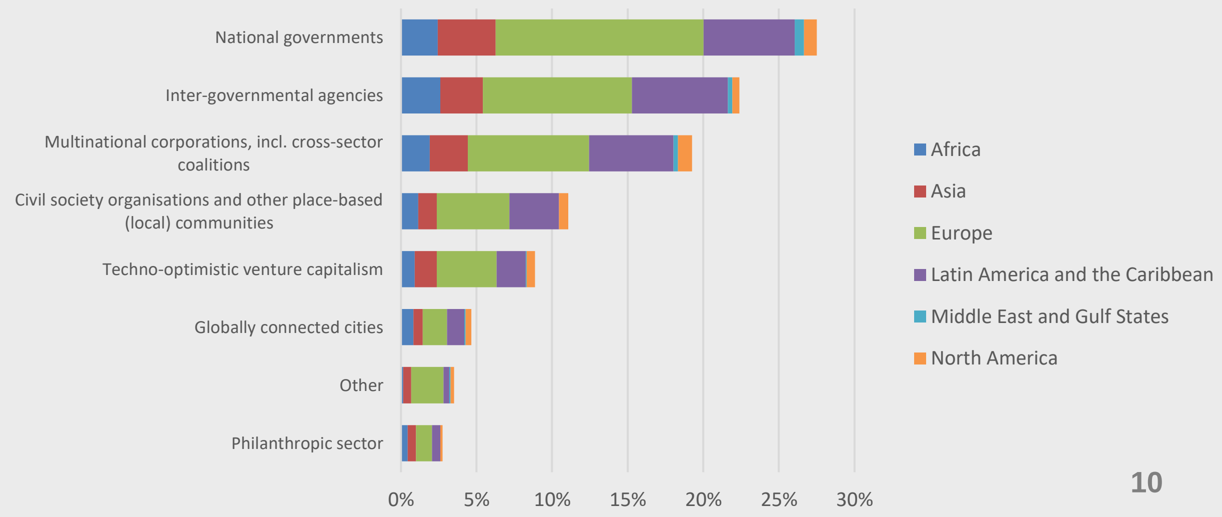
Government, inter-governmental agencies and large corporations are perceived as the best equipped to ***enable successful energy transitions****.*

Local communities are recognised as having the biggest role among ***bottom-up leadership*** *options.*

Q: How do you see the outlook for international cooperation? (global view)



Where is the most effective leadership on global energy transition coming from? (global view)



What's next in World Energy?

- Further World Energy Pulses will be conducted from May onwards.

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Questions Emerging from the World Energy Pulse

New leadership questions emerging from this World Energy Pulse include:

1. Is 'deglobalisation' inevitable – what are the implications for accelerating and/or slowing global energy transition?
2. How can the inherent tensions in global energy transition be managed in a new context of interacting crisis and disruption-as-usual? What new World Energy Trilemma metrics are needed?
3. How are energy leaders connecting-the-dots between energy prices, system costs, affordability and equity concerns?
4. How are regional responses to these crisis and new visions of sustainable-, resilient-, circular- and regenerative- energy systems catalysing solution spaces, including institutional innovation and new market designs?
5. How will the new driver of demand-driven energy security reshape energy geo-politics or vice-versa?

The World Energy Council leverages **new and timely insights on energy** harvested from the world energy community, to inform, catalyse and support more effective collaborative actions in energy across the globe.

If you would like to join our community and receive World Energy Pulse insights, please contact Olulana Nwosu (Nwosu@worldenergy.org)

ABOUT THE WORLD ENERGY COUNCIL

Formed in 1923, the World Energy Council is the world's oldest member-based energy organisation and a registered charity.

We are **independent, impartial** and **open-to-all**. We do not advocate for any country, company, resource, technology.

Globally networked and locally strong, we work dynamically with 3,000+ member organisations, in nearly 90 countries, across all energy sectors.

Our **enduring mission** is to work together on better outcomes which nowadays means delivering more energy for sustainable development *and* climate neutrality.

In 2019, the World Energy Council launched a new vision of '**Humanising Energy'**. Involving more people and communities at all levels of society is the best way to manage global energy transition.

The **next big thing in energy** is a series steps which accelerate the opportunities for learning with and from each other with the increasing diversity of place-based energy transitions.

We are working on **a step change in global energy literacy** – the essential first step to achieving billions of better lives and a healthy planet.

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