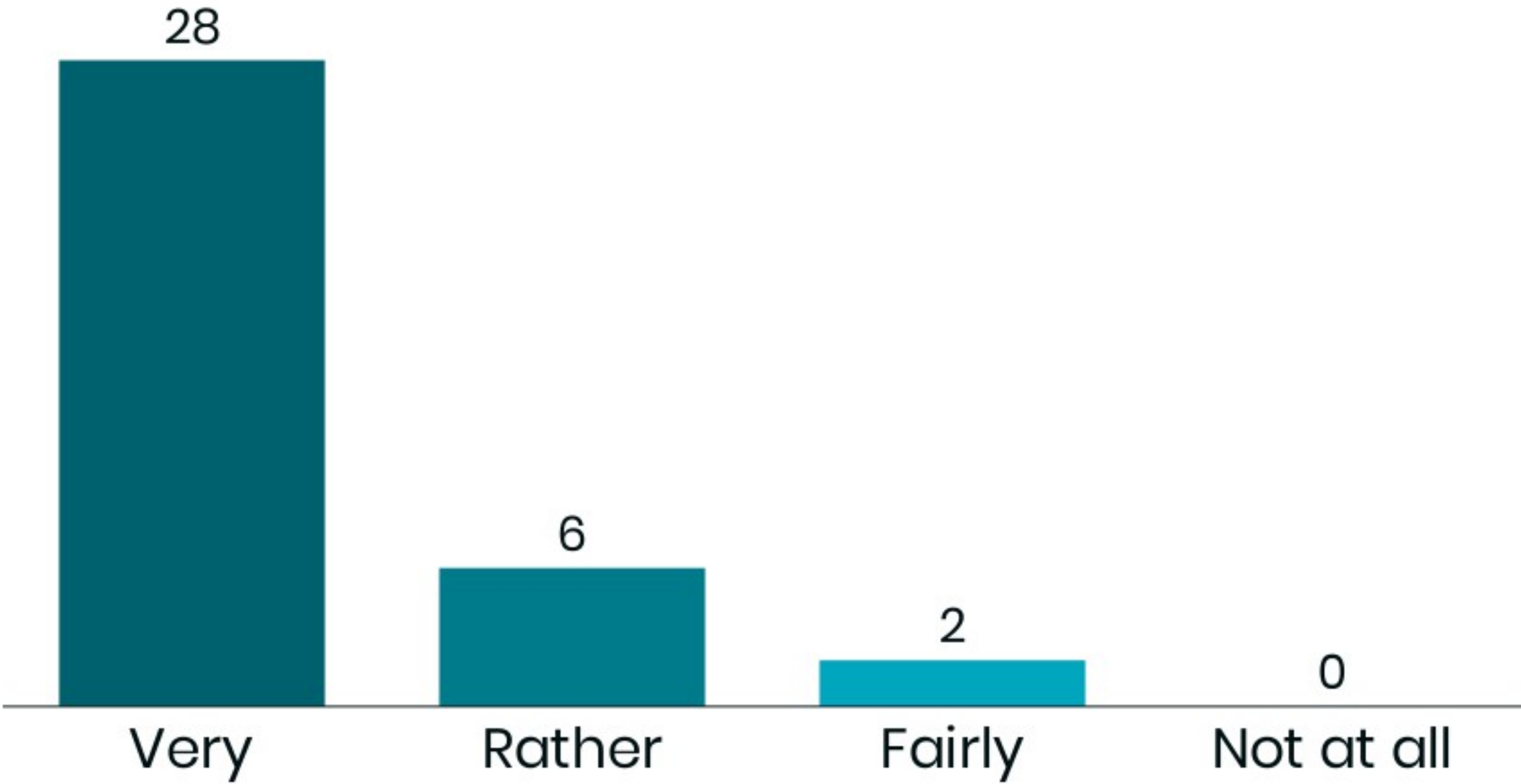
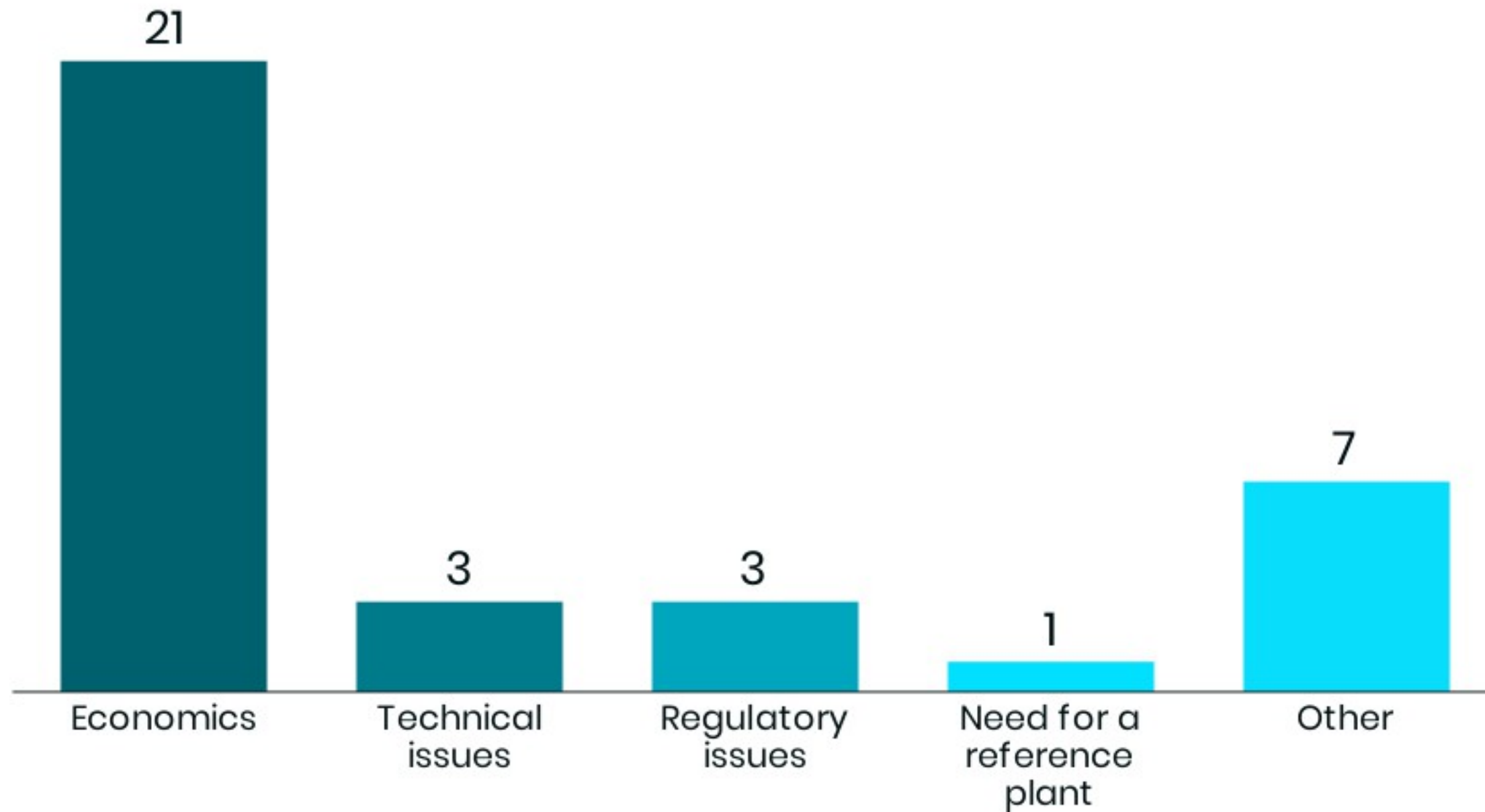


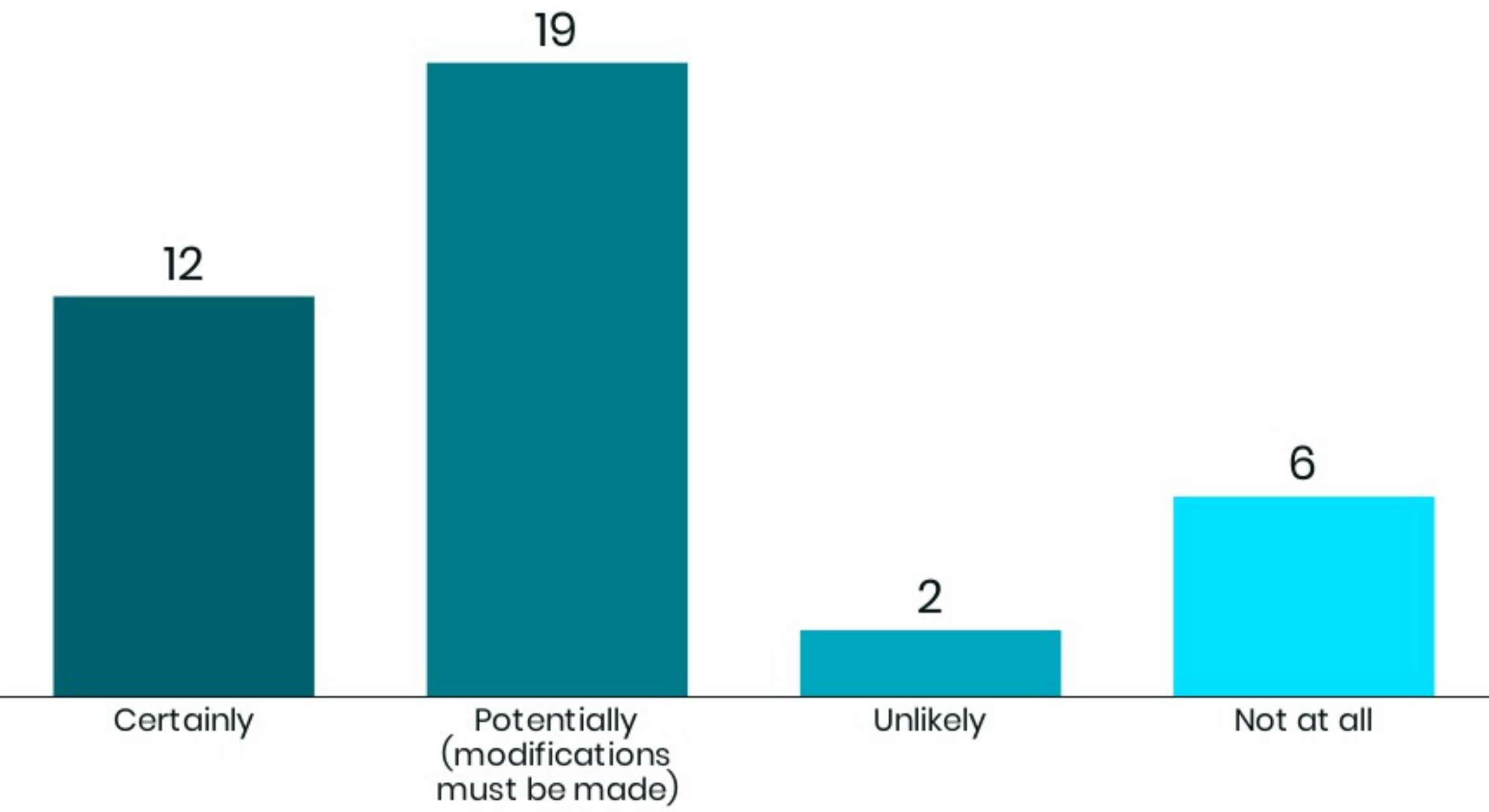
How appealing nuclear cogeneration as a possible means to support a sustainable energy transition?



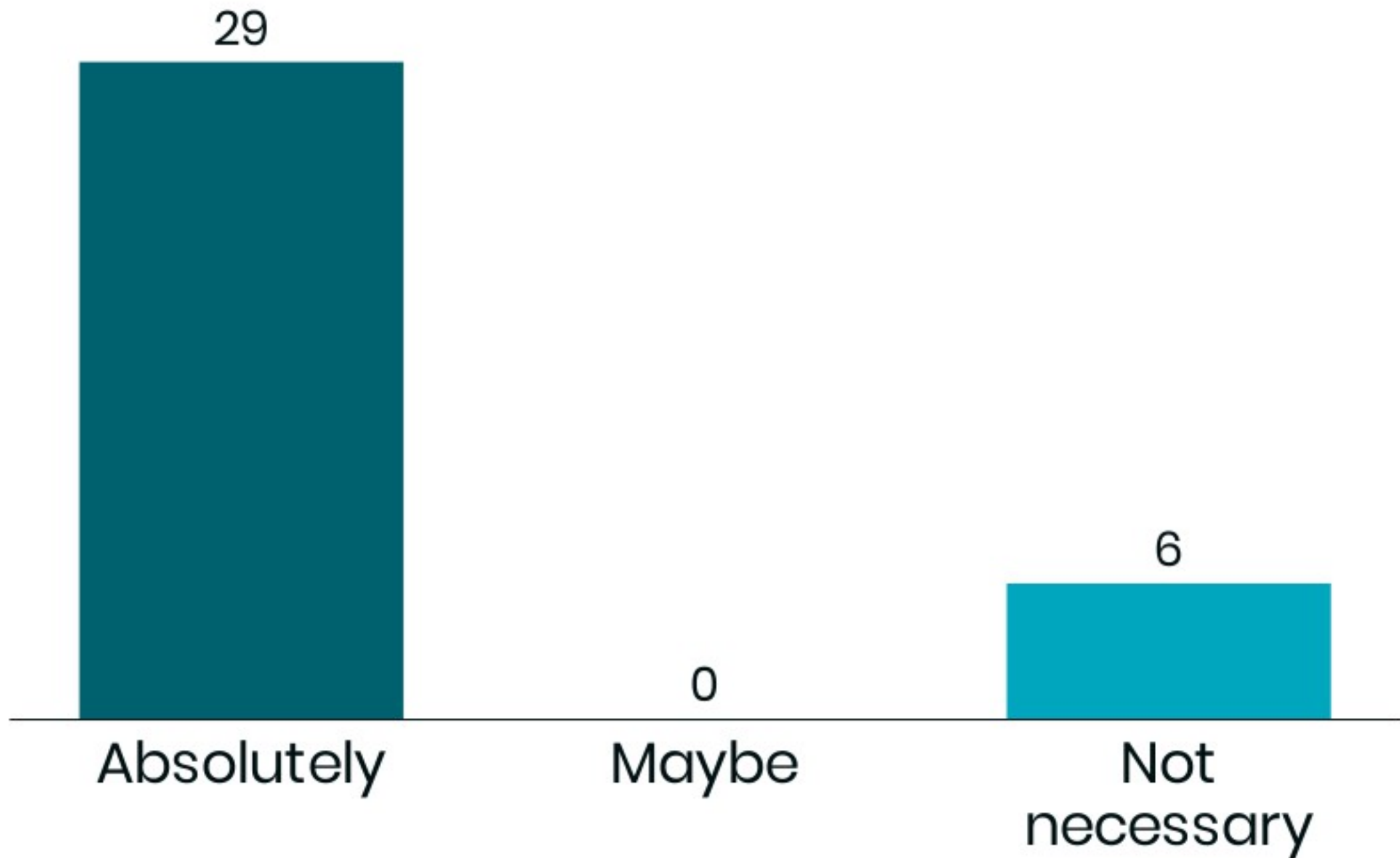
What is the key challenge for the deployment of nuclear cogeneration in your country?



Based on your current national regulation, can nuclear cogeneration be readily deployed in your country?



Do you believe that a demonstration or a reference plant is needed for every application of nuclear cogeneration?



What are the key challenges for the deployment of nuclear cogeneration?

Economics and Political will

Size

Lack of end-users
implication and
engagement during
development phase

Capital cost

Adaptability to the market
needs including economics
and business model.

Demonstration Public
acceptance

Political will and multiple
stakeholders.

Restricted EPZ Costs Safety
Efficiency Legal framework
Flexibility

Public acceptance

What are the key challenges for the deployment of nuclear cogeneration?

-Public Acceptance -Policy

Reasonable pricing

-Integration into the market

Political will and economics

Tardive consultation (by the development institutions) of the full spectrum of stakeholders

Connecting to the grids

Inability to assess cost implications separately from the electrical application of the plant, Kurchatov report \$250/kWth for heat pump, how this integrates into overall plant cost and financed (incl lifecycle costing)???

Adaptability to the market needs including economics and business model. Political will and multiple stakeholders. Public acceptance.

Approval from regulatory body. Development of new regulations.

What are the key challenges for the deployment of nuclear cogeneration?

For the well advanced countries the Key challenges are economic ; for the newcomers, they are political

Public acceptance of nuclear. Economics and competition on electricity market and heat market.

Economics, availability of the right size reactors

Public acceptance, economics and competition on electricity

Economic is the key challenges for nuclear cogeneration

economics and customer base

Public acceptance for nuclear scheme.

Safety criteria for Generation IV (if applied).

It is matter of time. Possibility exists within five to ten years.

What are the key challenges for the deployment of nuclear cogeneration?

I think that proven SMR is an important key for the deployment of nuclear cogeneration

There is need to consider small, medium and large requirements as the deployment will be demand-driven and not the supplier-driven. For example, with respect to nuclear desalination, the water requirement will be different at different location.

Solving the socio-economical and political issues in order to gain acceptance.

Public acceptance

Coupling demonstrator for process heat application and related business models

making economically affordable against of low price fossil fuel is the biggest challenges and also safety concerns and public acceptance after that.

Economics and Licensing issues

water source available, appropriate technology, government commitment

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What are the key challenges for the deployment of nuclear cogeneration?

Create new CRP and realize new international project on large-scale low-temperature nuclear power cogeneration on the basis of heat pumps on carbon dioxide for heating districts, distillation desalination plants and biocomplexes on closed ground



What are some of the major technical hurdles to overcome for the deployment of various applications of nuclear cogeneration?

No technical issues for low temperature applications with present PWR.

How to Manage Multiple Exits in Different Markets.

No hurdles for nuclear desalination. R&D is a continuous process for better results.

Different for different countries: economics, government support, public acceptance, legislation, regulatory framework.

What is back-up for nuclear plant for district heating and industrial heat.

Technology maturity (differing based on application), safety regimes (chemical, nuclear).

no major technical issues Economics is the main driver and technology that makes co generation less expensive should be the highest priority

Materials that can withstand harsh environment of Generation IV reactors.

First-technical, then economical

What are some of the major technical hurdles to overcome for the deployment of various applications of nuclear cogeneration?

Heat transfer/transportation to utility sites. It has limitation.

Adjusting large-scale nuclear district heat supply into existing DH networks

Human Resource development

relatively low maximum temperatures could be provided by current NPPs
heat transport losses

Licensing designs of SMRs for co-generation purposes

population acceptance, distance to final users, economic issues, trained staff, implication of stakeholders

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Lack demonstration project of low-temperature nuclear power cogeneration on the base of large-scale heat pump on carbon dioxide (up to 100 MWth)



What are some of the major technical hurdles to overcome for the deployment of various applications of nuclear cogeneration?

economics and political will