International Energy Agency

Regulatory Roadmap and Toolkit

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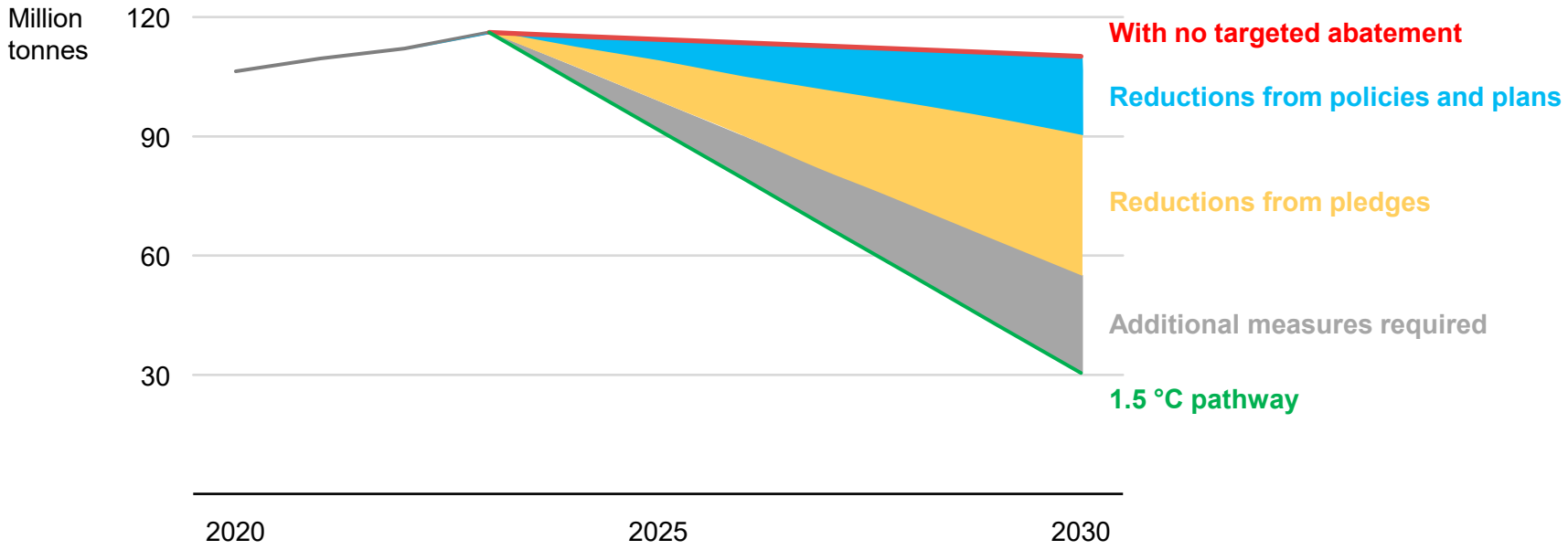
Focus on implementation and delivery on pledges

Reductions in methane emissions from fossil fuel operations from existing policies and pledges



Achieving all methane pledges would deliver the majority of the emissions cuts needed to 2030 to align with 1.5 °C. But many pledges are not backed up by firm implementation plans

IEA has developed tools to aid decision-makers on methane

- The **IEA Global Methane Tracker 2024** provides detailed estimates of methane emissions, information about abatement options, and a policy explorer tool

- The **Regulatory Roadmap and Toolkit** is a detailed 'how-to' guide for policy makers and regulators seeking to cut methane emissions
    - *Translated into: Arabic, Chinese, French, Portuguese, Russian, and Spanish*

A ten-step guide for policy makers

Understanding the setting

1. Understand the legal and political context
2. Characterise the nature of your industry
3. Develop an emissions profile

Regulatory design

4. Build regulatory capacity
5. Engage stakeholders
6. Define regulatory objectives
7. Select the appropriate policy design
8. Draft the policy

Implementation

9. Enable and enforce compliance
10. Periodically review and refine your policy

Understanding the setting

1 Understand the legal and political context

- Which agencies have jurisdiction over methane and what tools do they have?
- What policies and regulations are already in place?
- Are there any relevant political considerations?

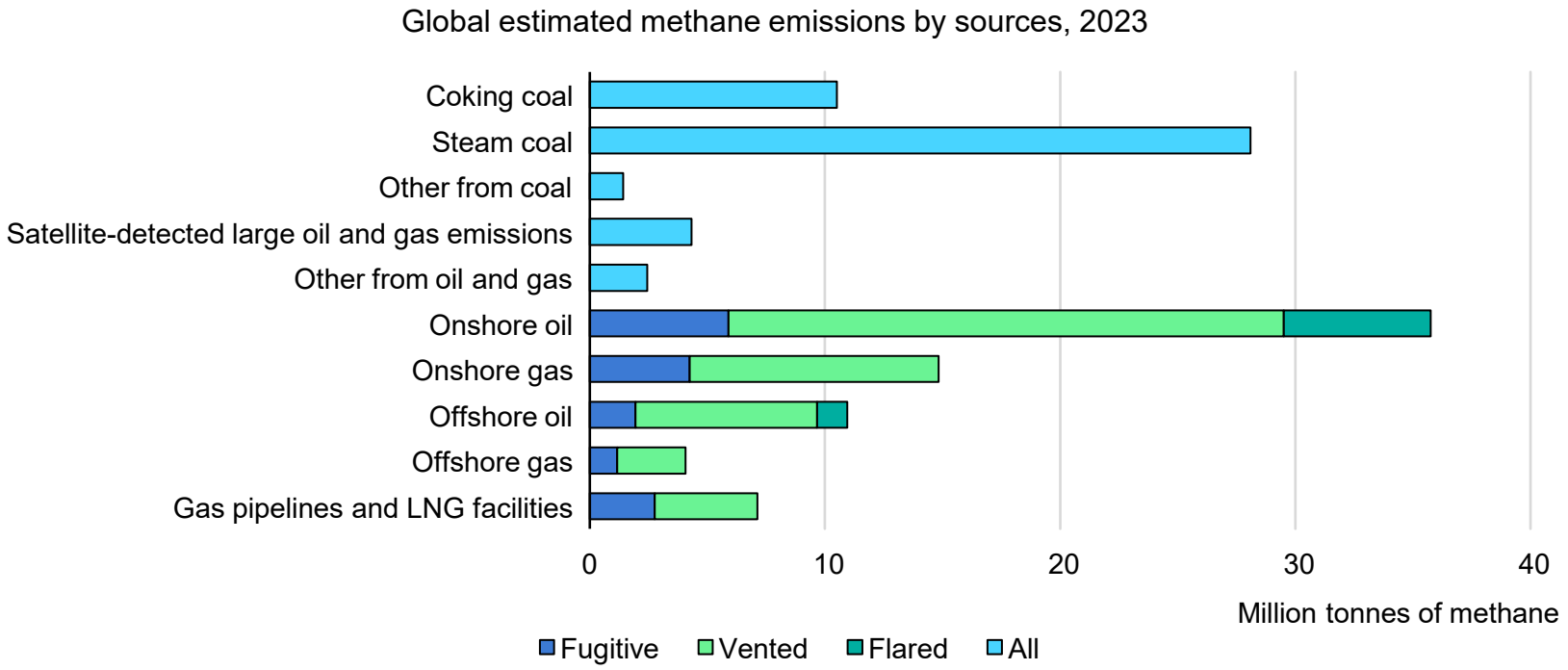
2 Characterise the nature of your industry

- What role do operators in your jurisdiction play in the gas value chain?
- What is the structure of the industry?
- What and where is the resource located?
- At what state is your jurisdiction’s energy development?

3 Develop an emissions profile

- How much methane is emitted and what are the biggest problem sources?
- How can you gather information about equipment and components used at a typical site?
- Do you have a plan for identifying your biggest emissions sources, over time?

Developing a by-source emissions profile



Flaring and venting associated with oil production account for the vast majority of global emissions.

Regulatory design

4 Build regulatory capacity

- Do you have the institutional resources and expertise you need to design and implement methane policies and regulations?
- Which resources are missing and who might be able to help you bridge capacity gaps?

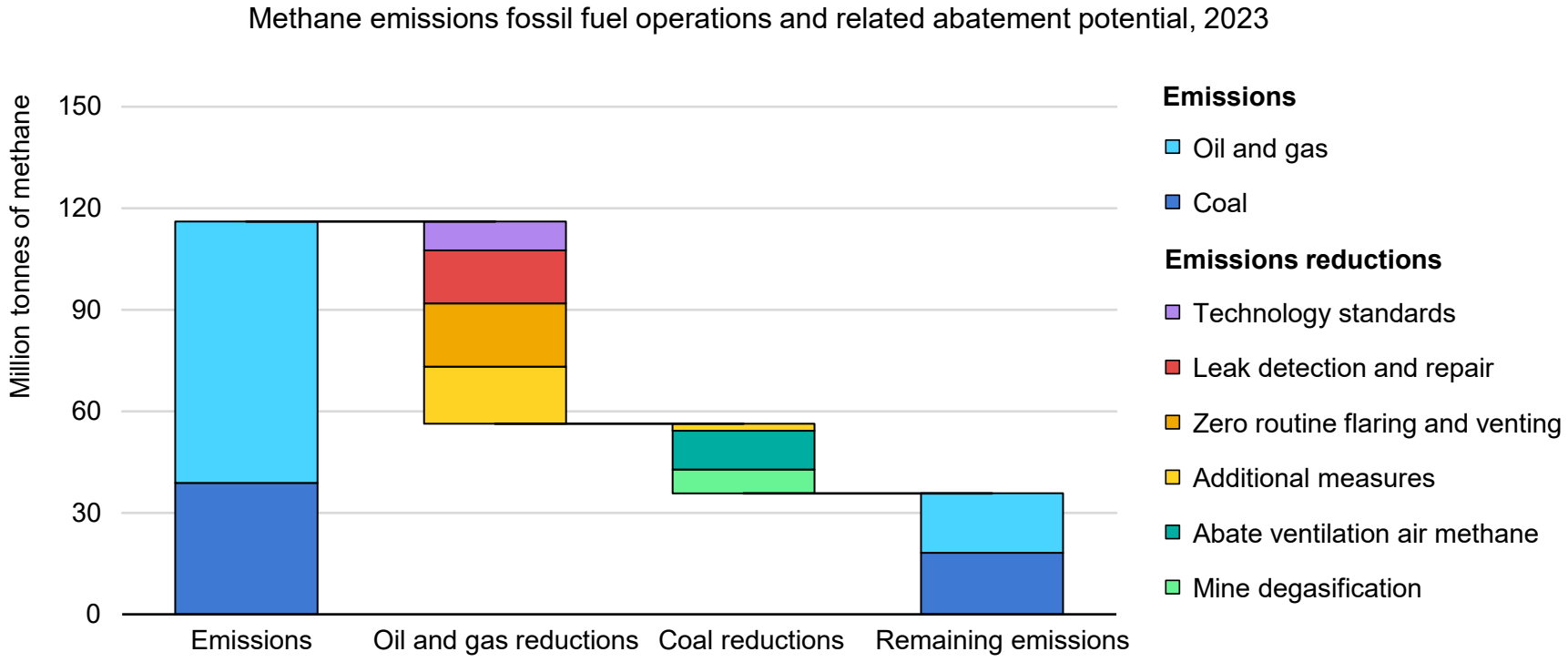
5 Engage stakeholders

- Who are the relevant stakeholders?
- Which companies need to be involved?
- Are there other regulators you should be in touch with?

6 Define regulatory objectives

- Do you have a high-level reduction target or goals for particular industry segments?
- Are you targeting specific measures (e.g. eliminating routine flaring and venting) or compliance objectives (e.g. number or % of audited installations)?

Emissions estimates can provide insights into policy options



We estimate that well-established policy tools could cut methane emissions by half
Additional reductions would require policies that on robust measurement and verification

Regulatory design and implementation

7 Select the appropriate policy design

- What is the overarching structure of your regulatory regime?
- What types of tools are best suited for your strategy and setting?

8 Draft the policy

- Are there existing regulations we can revise or use as a guide?
- Are there lessons to be learned from peer countries with existing regulations?

A wide variety of different policy and regulatory tools

Regulatory structure
Case-by-case regulation
- Permits - Contracts
Generally applicable regulations
- Methane strategy - Methane regulation

Approaches to regulation
Prescriptive
- Leak detection and repair - Best available technology
Performance-based
- Emissions standards - Methane intensity standards
Economic
- Methane emissions taxes - Venting and flaring taxes
Information-based
- Impact assessment - Information provisions

Essential programme elements
Monitoring
- Measurement campaigns - Satellite detection
Recordkeeping and reporting
- Greenhouse gas reporting - Reporting flaring and venting
Verification and enforcement
- Third-party verification - Sanctions
Policy co-ordination
- Loans and grants - Research and development
Adaptive regulation
- Goal review - Compliance flexibility

Typology of regulatory approaches to reducing oil and gas methane

Approach	Transaction Costs	Rigidity	Preconditions
Prescriptive: Command and control specific actions or procedures	**Low** - Simple to administer for both regulators and firms	**High** - Only prescribed changes will take place	**Moderate** - knowledge of facilities' emissions needed
Performance-based: Establish standards and targets, but not a technical pathway	**Moderate** - Monitoring and follow-up are needed	**Low** - Encourages different solutions	**High** - Requires information on baseline and overall emissions
Economic: Induce action with penalties or financial incentives	**High** - Requires robust verification systems	**Low** - Enables company specific abatement strategies	**Moderate** - Requires knowledge of baseline emissions
Information-based: improve understanding of emissions with data reporting requirements	**High** - Demands collecting and analysing information	**Moderate** - Allows for different solutions in some cases	**Low** - No need of previous information

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9 Enable and enforce compliance

- How to handle monitoring, reporting and verification (MRV)?
- How to enforce policies and what types of sanctions might be most appropriate?

10 Periodically review and refine your policy

- Should there be phased requirements?
- Would flexibility mechanisms be appropriate?