

IEA Caspian Energy Policy Dialogue and Training
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Session 2: Energy Efficiency Governance

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What do we mean by *Governance*?

- n 'The exercise of political authority and the use of institutional resources to manage society's problems and affairs'
- n 'the use of institutions, structures of authority and collaboration to allocate resources and coordinate or control activity in society or the economy'

WHAT IS *ENERGY EFFICIENCY GOVERNANCE*?

- Consultative processes to engage key stakeholders
- Legal frameworks that convey authority and enable effective government action
- Institutional arrangements for developing policy and implementing programs
- Coordination mechanisms within, between and across levels of government
- Oversight and results monitoring

Energy efficiency governance combines legislative and regulatory frameworks, institutional arrangements, funding provisions, and coordination mechanisms that enable the implementation of energy efficiency policy

Outcomes of “Good” EE Governance

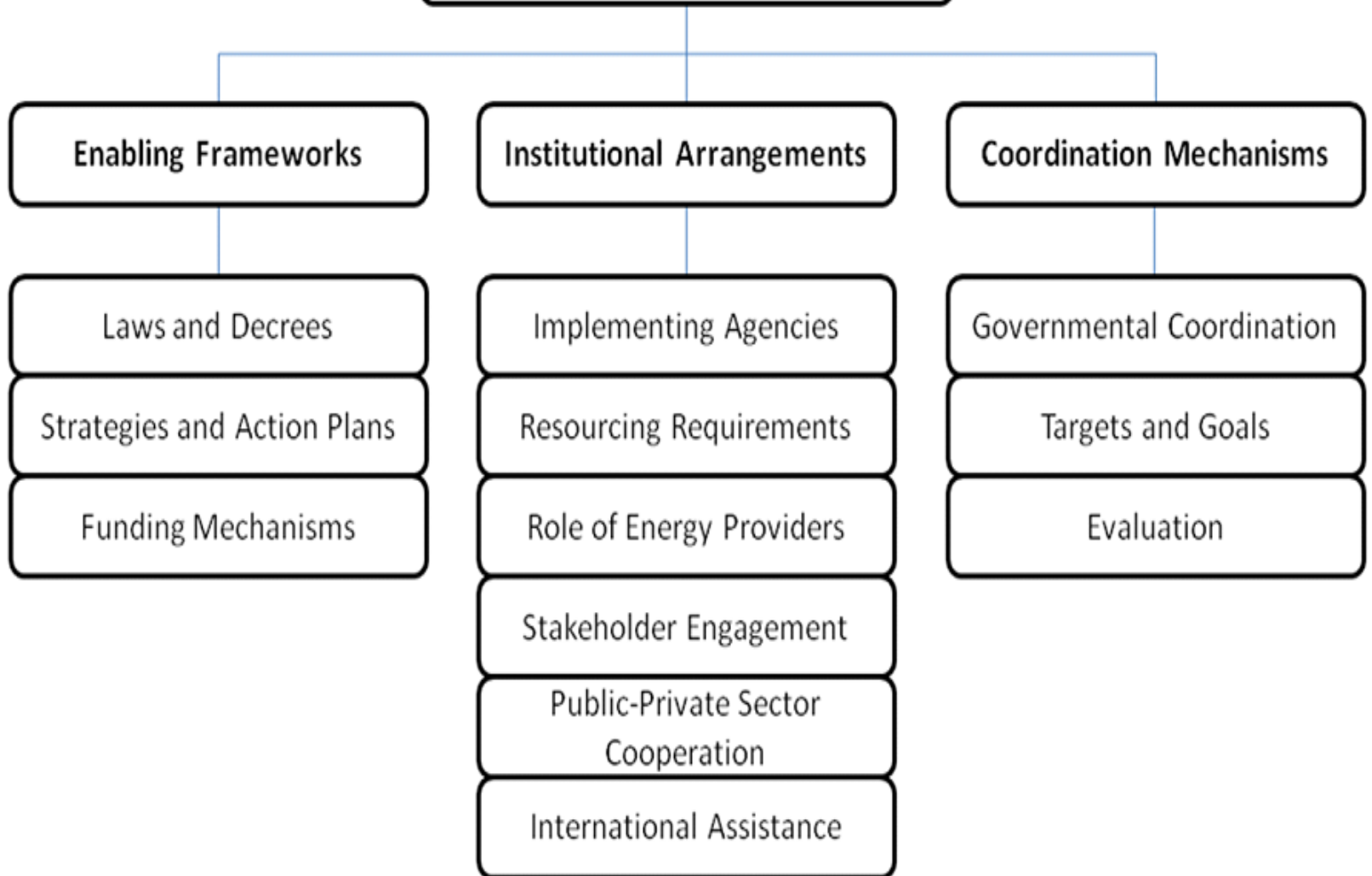
- n Implementation authority is clear
- n Accountability is established
- n Political consensus is built
- n Implementation partnerships are created
- n Resources are mobilized
- n Oversight arrangements are in place



Background

- n Global effort led by the International Energy Agency's Energy Efficiency Unit
- n Financial and analytical support from EBRD and IDB
- n Project advised by a Reference Group of Governance experts
- n Coordinated with parallel efforts being underway by UNESCAP, World Bank, WEC, and others

Energy Efficiency Governance

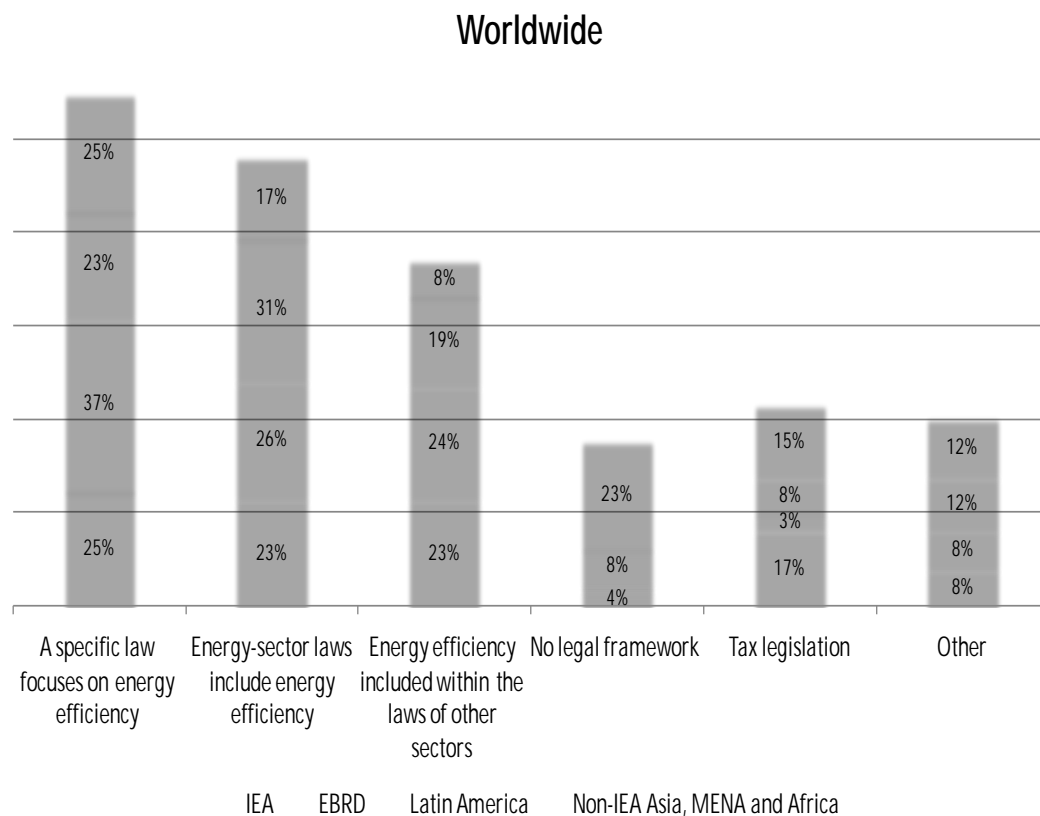


Enabling Frameworks

Energy Efficiency Laws and Decrees

- n Give direction to government action
- n Provide statutory basis for regulations and market mechanisms
- n Assign responsibility for implementation
- n Specify funding mechanisms for EE implementation
- n Set oversight arrangements

Legal Frameworks Promoting Energy Efficiency



Sample Energy Efficiency Laws

| Country | Law title | Coverage (sector, end-users) | Enactment date |
|--------------------|---|--|-----------------------|
| Albania | Energy Efficiency Law (2005) | Appliances Buildings Industry | 2005 |
| Armenia | Law on Energy Saving and Renewable Energy | Framework Industry | 2007 |
| Czech Republic | Energy Efficiency Act | | Number 40 6 (2000) |
| Kazakhstan | New Law on Energy Saving | Industry , housing, large energy users | 2010 |
| Romania | Law Concerning the Effective Use of Energy | Framework | 2000 |
| Russian Federation | On Energy Conservation and Increase of Energy Efficiency (Federal law No. 261-F3) | All large energy users | 2009 |
| Turkey | Energy Efficiency Law | All | 2007 |
| Ukraine | Law on Energy Conservation | Utilities | 2005 |

What does your law look like?

- n Scope: Comprehensive or Narrow?
 - | Comprehensive laws can take years to enact
 - | Narrow laws can be quickly enacted but have less impact
- n Soft law – hard law
 - | Soft laws articulate objectives without specifying policies
 - | Hard laws convey authority and specify obligations
- n Avoiding implementation delays
- n Balancing 'carrots' and 'sticks'
 - | Carrots include incentives & market mechanism
 - | Sticks include rules & regulations
 - | Both are needed
- n Assigning implementation responsibility
 - | Resources and capacity building must accompany responsibility
- n Taking on difficult sectors (transport, public sector)

Your energy savings law (cont.)

- ✓ What are the three most important elements of your law?
- ✓ Which sectors does your law target?
- ✓ What type of policies does it include?
- ✓ What are the steps required to enact the law?
- ✓ Who was consulted in developing the law?

Strategies and Action Plans

n Importance

- | Place EE policy within the broader policy context;
- | Prioritise energy efficiency policies;
- | Capture synergies between policies;
- | Engage stakeholders and build consensus;
- | Assign responsibility & establish accountability

n Guidelines for effective strategies & action plans

- | Take a long-term, high-level viewpoint
- | Have a strong analytic foundation;
- | Incorporate specific time-bound targets;
- | Be comprehensive and consider all sectors
- | Prioritise the most-promising sectors and policy measures;
- | Identify the resources needed to turn strategy into action;
- | Keep an open mind.

EE Strategies and Action Plans

| Country | Strategy | Year |
|--------------------|---|-------|
| Albania | National Energy Efficiency Action Plan (NSEE) | 2010 |
| Armenia | National Energy Strategy | Draft |
| Belarus | National Energy Conservation Programme, 2006-10 | 2005 |
| Bulgaria | First National Energy Efficiency Action Plan, 2008-10 | 2007 |
| Croatia | Croatia Regular Review of Energy Efficiency Policies | 2010 |
| Czech-Rep. | National Energy Efficiency Action Plan | 2007 |
| Hungary | Energy Efficiency Action Plan | 2008 |
| Kosovo | Kosovo Environmental Action Plan, 2006-10 | |
| Latvia | Latvia's First Energy Efficiency Action Plan, 2008-10 | |
| Lithuania | Energy Efficiency Action Plan | 2007 |
| Romania | NEEAP 2008-2010 | |
| Russian Federation | Programme for an Energy Efficient Economy | 2001 |
| Serbia | National Energy Efficiency Action Plan | 2004 |
| Slovak-Rep. | Energy Efficiency Action Plan for years 2008-2010 | 2007 |
| Slovenia | National Action Plan Energy Efficiency 2008-2016 | 2008 |
| Turkey | Energy Efficiency Strategy | 2004 |
| Ukraine | Ukraine's Energy Strategy to 2030 | 2009 |

Flash quiz

1. How do you ensure good consultation on your energy efficiency strategy and/or action plan?

Public consultation

- n Design a very open and transparent consultation process where key stakeholders are able to express their needs and views.
- n Develop a draft strategy or action plan which seeks responses to key questions.
- n Ask the responsible Minister to lead the effort (to ensure stakeholders know government is serious about the process).
- n Record the feedback you receive from key stakeholders.
- n Produce final strategy or action plan and make it widely available and communicated.



EE Funding Mechanisms

- n Reliable and adequate funding is essential
- n No coincidence: countries with well-developed EE industries have effective EE funding mechanisms
- n Key considerations for effective funding include:
 - § Adequacy - funding should be sufficient to finance policy implementation costs
 - § Stability – funding should be steady and predictable
 - § Autonomy – funding should be under the control of the implementing agency.
 - § Origin – the funding source should be credible and contribute to overall EE policies.

Scoring EE funding mechanisms

| Funding mechanism | Funding good governance score | | | | |
|---------------------------------------|-------------------------------|-----------|---------------------|--------|-------------------|
| | Adequacy | Stability | Autonomy | Origin | Distortive Effect |
| Government budgets | √ | | | | √ |
| Grants from other government agencies | √ | | | | √ |
| Energy or environmental taxes | √ | √ | √ (if earmarked) | √ | |
| System public benefit charges | √ | √ | √ | √ | |
| Stimulus funds | √ | | | | |
| Licensing and permitting fees | | √ | √ | | √ |
| Carbon finance | √ | | | √ | √ |
| Donor funding | √ | | | | |
| Fee-for-service arrangements | | √ | √ | √ | √ |



Guidelines for EE Funding

- n Funding from budget appropriations puts EE implementation at risk of short-term fluctuations
- n Earmarked energy/environmental taxes and system public benefit charges pay a double-dividend:
 - § generate revenue;
 - § discourage energy consumption by raising prices.
- n A mix of different funding sources contributes to overall funding reliability
- n System public benefit charges (such as in Brazil) are a close-to-ideal funding mechanism

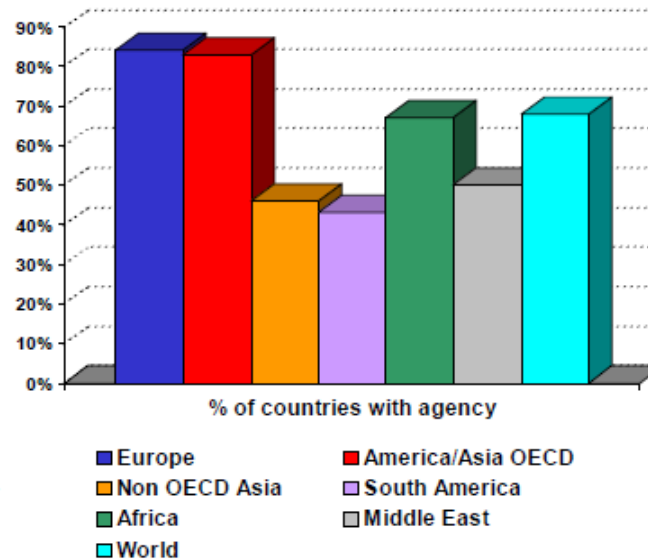
Institutional Arrangements

Discussion

Who is responsible for energy efficiency in your country?

Implementing agencies

Two-thirds of countries recently surveyed indicated a government-sponsored EE agency in place, defined as “a body with strong technical skills, dedicated to implementing national energy efficiency policy”.



Source: WEC/ADEME Survey

There is considerable variety around the world



Establishing EE Implementing Agencies

- n A statutory basis conveys status and permanency
- n Many organizational types from which to choose
 - § Generalized government energy agencies
 - § Specialized government EE agencies
 - § Combined EE/clean energy agencies
 - § Independent authorities and state-owned corporations
 - § EE NGOs
 - § EE public/private partnerships.
- n EE institutional design should reflect implementation requirements and target sectors.
- n New types of EE institutions are emerging

Energy efficiency agencies: a sampling

| Organizational Type | Examples | |
|---|---|--|
| | Country | Organization |
| Department within a Government energy agency | Canada China Indonesia Russia Singapore Sweden Thailand Turkey | Natural Resources Canada National Development & Reform Commission Ministry of Energy and Mineral Resources Russia Energy Agency National Environment Agency Swedish Energy Agency Ministry of Energy Ministry of Energy and Natural Resources |
| Specialized Governmental energy efficiency and clean energy agencies | Brazil Czech Republic Hungary India New Zealand Tunisia Ukraine | Procel ICE Group The Energy Centre Bureau of Energy Efficiency Energy Efficiency and Conservation Authority National Agency for Energy Management (ANME) National Agency for Efficient Use of Resources (NAER) |
| Independent energy efficiency and clean energy Statutory Authority or Corporation | Costa Rica Finland Korea Norway | ICE Group Motiva Oy Korea Energy Management Corporation ENOVA |
| Energy efficiency and clean energy NGO or public benefit organization | Jordan United Kingdom | National Energy Research Centre Energy Trust and the Carbon Trust |
| Energy efficiency and clean energy Public/private partnership | Chile | Chilean Energy Efficiency Agency |

Choosing an implementing agency

| Organizational Type | Advantages | Disadvantages |
|---|--|---|
| Government energy agency | <ul style="list-style-type: none"> Access to decision-makers Influence on policy & legislation | <ul style="list-style-type: none"> Limitations on salary and staff Difficulty in taking decisions Must compete for attention Turnover of officials |
| Government energy efficiency and clean energy agencies | <ul style="list-style-type: none"> Credibility with other public agencies Ability to specialize and focus Often have a firm basis in law Cultural benefits | <ul style="list-style-type: none"> Limitations on salary and staff Potential opposition from elsewhere within government |
| Independent energy efficiency and clean energy Statutory Authority or Corporation | <ul style="list-style-type: none"> Linkages to private sector Access to multiple public & private funding sources Independence and autonomy Firm basis in law Cultural benefits | <ul style="list-style-type: none"> Cannot directly access donor funding |
| Energy efficiency and clean energy Public/private partnership | <ul style="list-style-type: none"> Independence and autonomy Access to private sector resources, Cultural benefits | <ul style="list-style-type: none"> Only indirect access to policy makers Difficulty in policy coordination May not be permanent arrangement |
| Energy efficiency and clean energy NGO or public benefit organization | <ul style="list-style-type: none"> Independence and autonomy Credibility with stakeholders and consumers Cultural benefits | <ul style="list-style-type: none"> Only indirect access to policy makers Must compete for resources Lack of authority Difficulty in policy coordination May not be permanent arrangement |

EE Institutional Arrangements

| Country | Apex Agency | EE Agency |
|----------------|--|-------------------------------------|
| Armenia | Ministry of Energy and Natural Resources | |
| Czech Republic | Ministry of Industry and Trade | |
| Hungary | Ministry of National Development | Hungarian Energy Centre |
| Romania | Ministry of Economy and Commerce | Agency for Energy Conservation |
| Russia | Ministry of Energy | Russian Energy Agency |
| Turkey | Ministry of Energy | National Energy Conservation Centre |
| Ukraine | Ministry of Fuel and Energy | Energy Efficiency Agency |

Other institutional arrangements

- n Stakeholder engagement
 - | Useful in building consensus
 - | Improves policy quality
 - | Often leads to energy efficiency legislation
- n Public-private cooperation
 - | Public-private partnerships
 - | Voluntary energy efficiency agreements
 - | ESCOs
- n International donor assistance
 - | Useful in creating interest in energy efficiency
 - | Creating regional networks is an effective approach
 - | Creating sustainable results

Quick take discussion: institutional arrangements

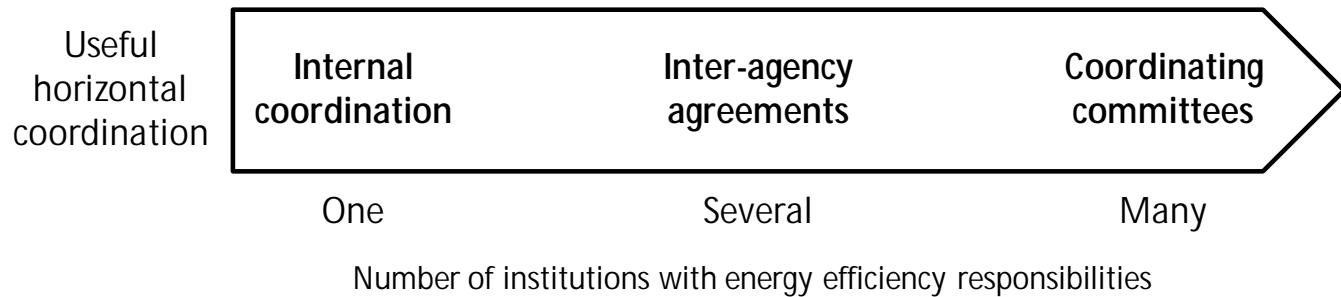
- ✓ What are the institutional challenges facing your country?
- ✓ What needs to happen in order for institutions in your country to be motivated/tasked to improve energy efficiency?

Coordinating Mechanisms

Coordination Mechanisms

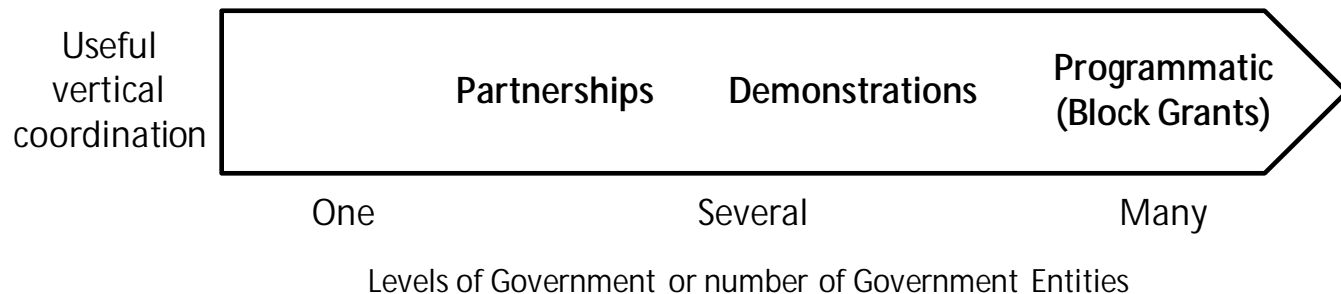
§ Intra-Governmental (Horizontal)

Cooperation among national government ministries and agencies



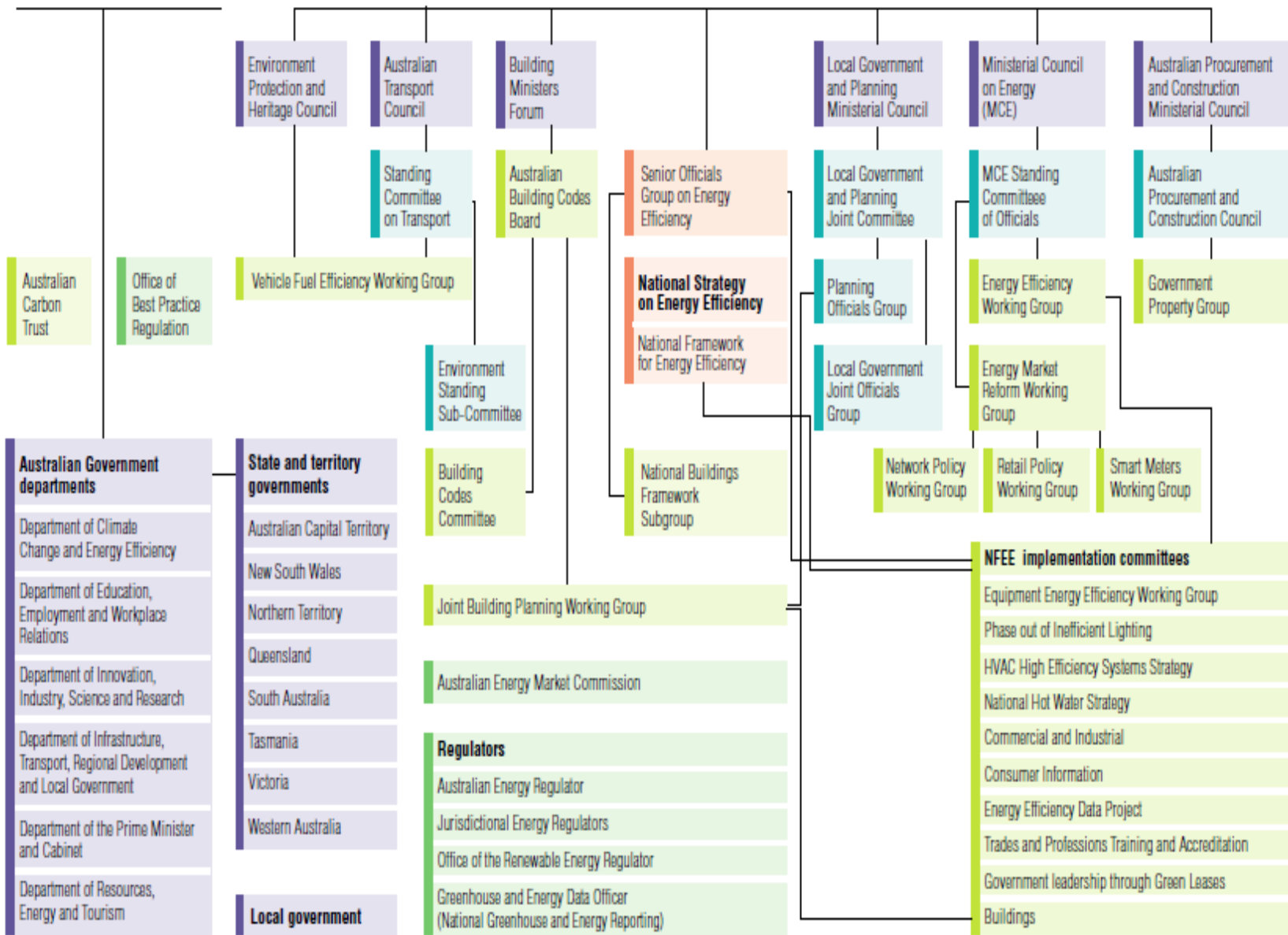
§ Inter-Governmental (Vertical)

Cooperation across levels of government, including national, regional and local government entities



Australian Government

Council of Australian Governments



■ Bodies with responsibility for measures and programs
 ■ Standing committees and senior officials
 ■ Working groups and other bodies who are developing or implementing measures and programs
 ■ Advisory and regulatory bodies

Figure 2.3. Current governance arrangements for energy efficiency

Flash quiz

- n How is energy efficiency policy coordinated in your country?

Targets and goals

n Value of EE targets

- | Motivate, challenge and direct EE policy
- | Facilitate results monitoring & policy adjustments
- | A concrete basis for planning programs, mobilizing funding, & staffing-up agencies.

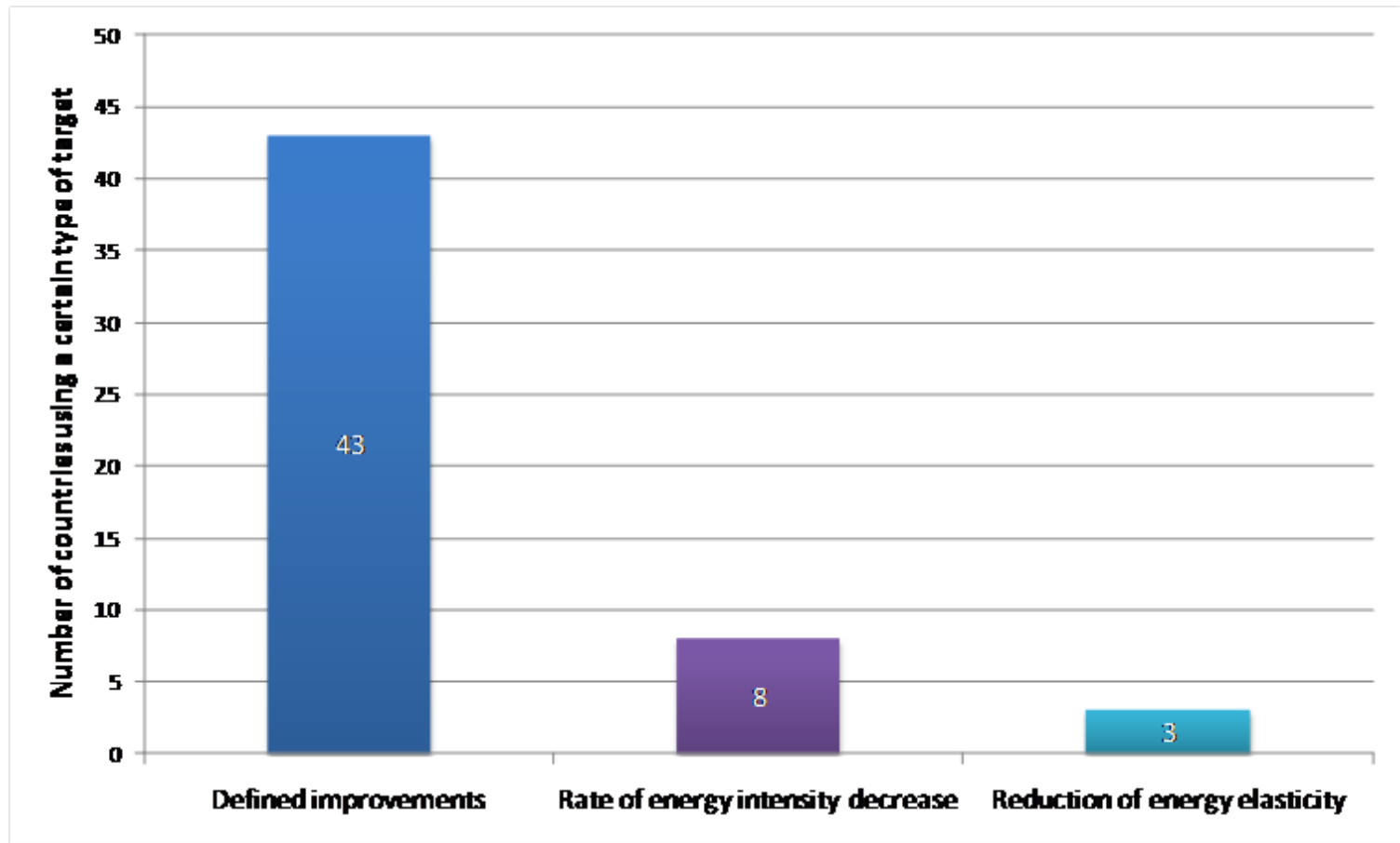
n Targets should be carefully developed and formulated

- | Strong analytic foundation
- | Should not stretch credibility
- | Should not be too long-term w/o interim targets

Formulating EE (or Carbon) Targets

| Type of Target | Description | Aggregation | Time frame |
|---------------------|---|------------------------------------|--|
| Defined improvement | Energy consumption or emissions (GWh, MtCO ₂) | Jurisdiction Sector Industry | Long term Medium term Short term |
| Intensity | Energy consumption or emissions per unit of economic activity | Enterprise Facility End-use | |
| Elasticity | Ratio of growth in energy consumption or emissions to growth in GDP or output | | |
| Benchmark | Energy consumption or emissions relative to others | | |
| Transactional | Buildings weatherized or CFLs installed | | |

IEA Survey Results: How Targets are Formulated



Energy efficiency target examples

| | |
|----------|--|
| Albania | Annual energy savings target of 160 Ktoe for 2016 (9%) and 26 Ktoe for 2011. |
| Belarus | Reduce GHG emission by at least 5% from 1990 levels in the commitment period 2008-12. Reduce GDP energy intensity from 26.1% to 30.4% by 2010 compared to 2005. |
| Bulgaria | Achieve a minimum annual energy savings target of 9% with 3% increment every three years: 3% by 2010, 6% by 2013 and 9% by 2016. |
| Croatia | Reduce emissions by 5% by 2020 compared with 1990 levels. |
| Hungary | Reduce CO ₂ emissions by 20% by 2020 compared to 1990 levels. Achieve a minimum annual energy savings target of 9% by ninth year of the period 2008-16. |
| Poland | Reduce CO ₂ emissions by 20% by 2020 compared to 1990 levels. Achieve a minimum annual energy savings target of 9% by ninth year of the period 2008-16. |
| Serbia | 6% adopted energy saving target in 2016; 1% adopted intermediate target in 2011. |
| Ukraine | Reduce energy consumption by 51.3% by 2030 compared with 2005 levels. |

Issues and complexities

- n **Political utility**
 - | Mobilising stakeholders
 - | Creating accountability in government
- n **Target horizon**
 - | balancing ambition and practicality without straining credibility
 - | Proven approach: long-term goal accompanied by interim targets
- n **Economy vs. sector targets**
 - | Variations in efficiency improvement potential and costs across sectors
 - | Proven approach: Economy-wide goals with sectoral targets

Guidelines for target setting

- n Targets should be accompanied by resources and enabling frameworks
- n Targets should be relevant and ambitious but achievable
- n Targets should be underpinned by analysis and stakeholder consultation
- n Targets should be straightforward to monitor, using existing data
- n Avoid overlapping and competing targets
- n Targets should be clearly documented and widely communicated

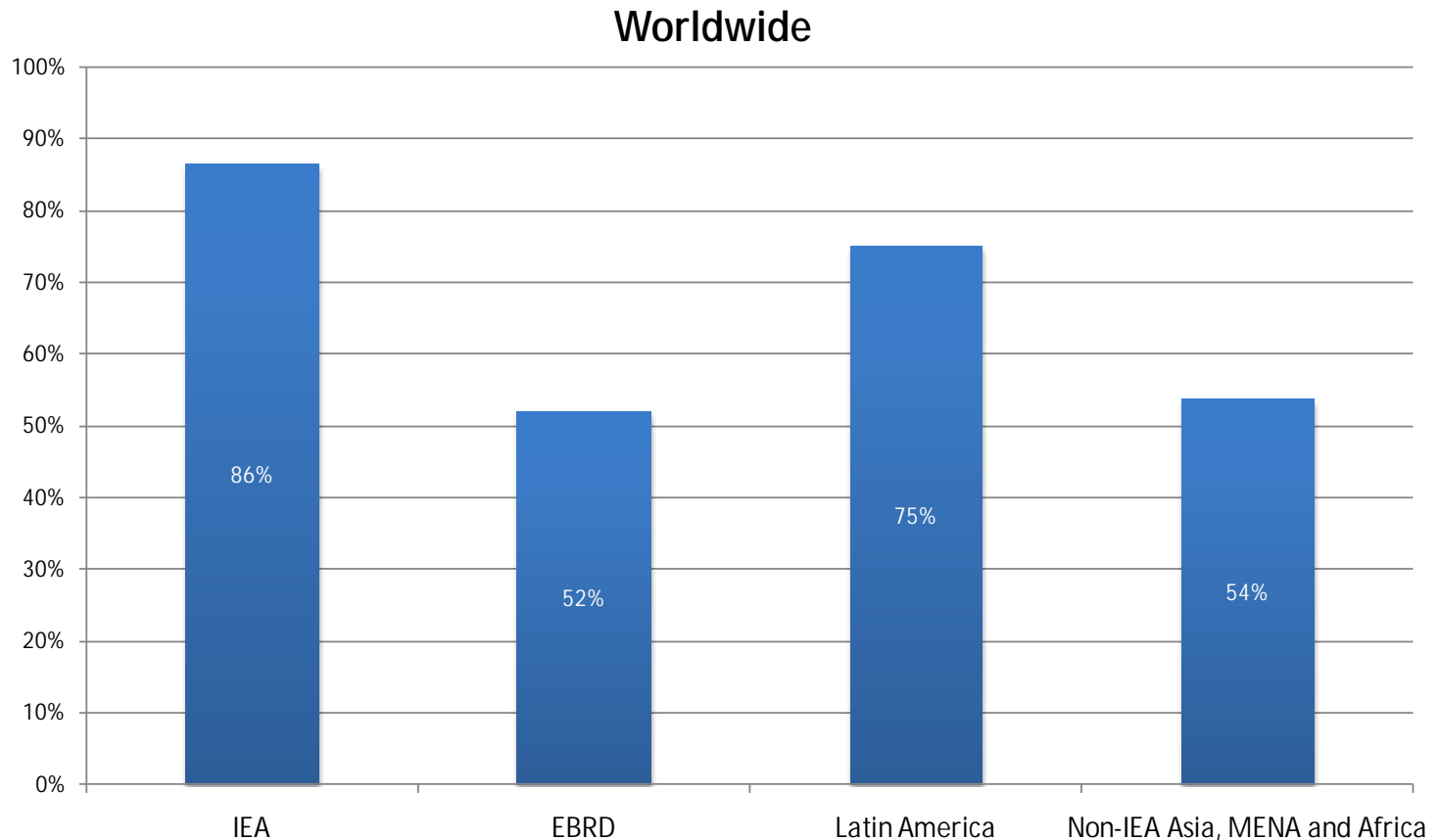
Coordinating EE and GHG reduction targets

- n Utility of targets creates a tendency towards proliferation
- n “Pan-caking” of EE and GHG reduction targets
- n Bifurcated government responsibility for EE and Climate Change can make the problem worse
- n Many governments have dual EE & GHG reduction targets
 - | EU CO2 target: 20% by 2020 compared to 1990 levels.
 - | EU EE target: Usage in 2016 lower by 9% relative to 2008
- n Coordination solutions:
 - | Use a common analytic foundation
 - | Show linkages in national plans for EE and GHG reductions
 - | Subsume EE plans within broader climate strategy
 - | Consolidate responsibility for EE and climate change

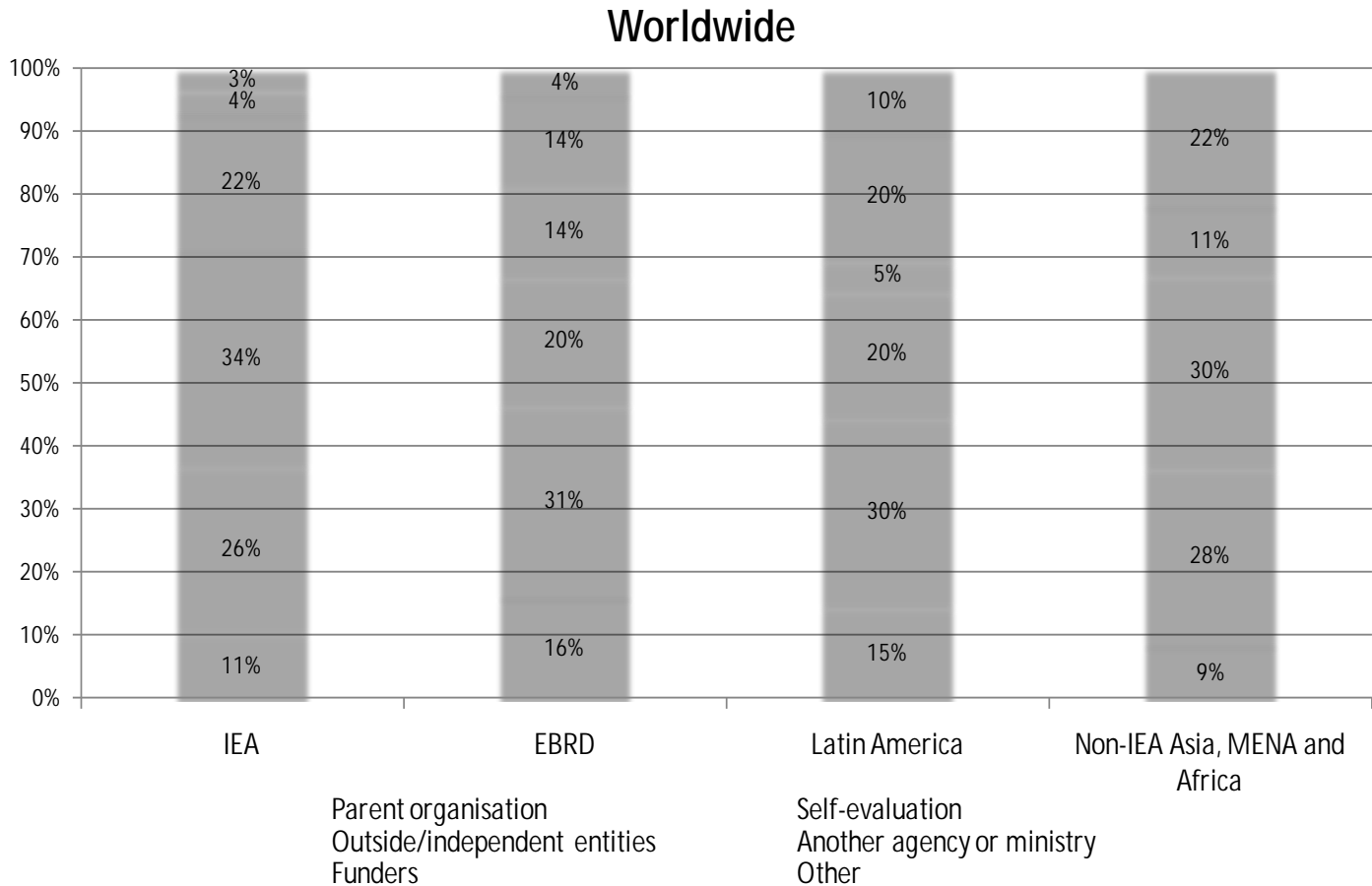
Evaluation

- n Evaluation is crucial as EE impacts are difficult to measure
- n Evaluation is important in all phases of EE policy:
 - l Learning from previous EE policy and programs
 - l Process and market evaluation during implementation helps assists EE managers to make needed corrections;
 - l Checking progress towards overall targets and goals
- n Although critically important, evaluation is often not done
 - l Evaluation remains superficial in most countries
 - l Evaluation and data collection capacity is critically low
 - l Evaluation is often considered an “overhead” cost

IEA Survey: Does Your Country Conduct Evaluations of EE Policies and Programs?



IEA Survey: Who Conducts Evaluations?



Evaluation

- n **Success factors:**
 - § Include evaluation within policy & program design
 - § Adopt and require common methodologies and protocols
 - § Invest in accurate data and statistics
 - § Assure adequate funding, including evaluation set-asides
 - § Develop and retain high calibre staff
 - § Create an “evaluation culture”
 - § Require evaluation as part of oversight arrangements
- n **Adopt “good governance” especially for evaluation:**
 - § Data credibility
 - § Independence and objectivity of analysis
 - § Transparency of results

EE governance elements interact

| EE Governance Mechanisms | EE Governance Outcome Objectives | | | | | |
|------------------------------------|----------------------------------|-----------------|------------------------|---|--------------------|--------------------------------|
| | Confer authority | Build consensus | Establish partnerships | Assign responsibility and create accountability | Mobilise resources | Establish oversight of results |
| Laws and decrees | ü | | | ü | ü | ü |
| Strategies and action plans | ü | ü | ü | ü | | |
| Funding mechanisms | | | | | ü | |
| Implementing agencies | | | | ü | ü | ü |
| Resourcing | | | | | ü | |
| Role of energy providers | ü | | ü | ü | | |
| Stakeholder engagement | | ü | ü | | ü | |
| Public-private sector co-operation | ü | ü | ü | | ü | |
| International assistance | | ü | ü | | ü | |
| Governmental co-ordination | ü | ü | | | | ü |
| Targets | | ü | | ü | | ü |
| Evaluation | | ü | | | | ü |



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A composite image featuring a globe with a grid overlay, set against a background of a city skyline at night with blurred lights and data-like lines. The globe is the central focus, with the text overlaid on it.

Energy Efficiency Governance