

Energy Transition Roadmap Template

Introduction

The **Energy Transition Roadmap Template** is a practical tool within the *Climate & Energy Governance Implementation Framework*, designed to guide stakeholders in planning and implementing the transition to clean, sustainable energy systems. This template supports policymakers, regional authorities, businesses, and civil society organizations (CSOs) in developing actionable roadmaps to achieve the Framework's energy transition goals, including 60% renewable energy by 2035 and 100% by 2050, while ensuring universal clean energy access, resilience, and equitable outcomes.

The template aligns with the Framework's principles of sustainability, equity, science-based decision-making, and cooperation, integrating the four pillars: Climate Mitigation, Climate Adaptation, Energy Transition, and Innovation & Technology. It provides a structured approach to map current energy systems, set transition targets, identify interventions, and monitor progress, fostering coordination across governance levels and sectors.

Objectives

- Assess current energy systems and their alignment with Framework goals.
- Set clear, science-based targets for renewable energy adoption and fossil fuel phase-out.
- Identify interventions (e.g., renewable energy deployment, grid modernization) to achieve transition goals.
- Engage stakeholders to ensure equitable and inclusive planning.
- Monitor and evaluate progress using standardized metrics.

Target Audience

- National and regional policymakers
- National Implementation Units
- Regional authorities and energy planners
- Businesses in the energy sector (e.g., renewable energy firms, utilities)
- CSOs advocating for clean energy and just transitions
- Communities affected by energy transitions

Energy Transition Roadmap

1. Current Energy System Assessment

Document the current energy mix, infrastructure, and policies to establish a baseline.

Field	Response
Energy Mix	E.g., 50% coal, 20% natural gas, 20% renewables, 10% nuclear
Infrastructure	E.g., Aging coal plants, limited grid storage, 5,000 MW solar capacity
Key Policies	E.g., Renewable energy mandate (20% by 2025), fossil fuel subsidies
Emissions Profile	E.g., 500 MtCO ₂ e from energy sector (40% of national emissions)
Access and Equity	E.g., 90% energy access, rural areas underserved
Alignment with Framework	E.g., Partial alignment (renewable target below 60% by 2035)

Instructions:

- Use data from national energy reports or the [Climate Policy Dashboard](#).
- Identify gaps (e.g., low renewable share, fossil fuel dependence) and equity issues (e.g., underserved communities).

Example: Country X's energy mix is 50% coal, 20% renewables, with aging infrastructure and 90% access. Its 20% renewable target by 2025 falls short of the Framework's 60% by 2035, requiring accelerated action.

2. Transition Targets

Set specific, science-based targets for the energy transition, aligned with Framework milestones.

Target	Timeline	Description
Renewable Energy Share	2035	E.g., Achieve 60% renewable energy in electricity mix
Fossil Fuel Phase-Out	2040	E.g., Phase out coal-fired power plants
Energy Access	2030	E.g., Achieve 100% clean energy access, prioritizing rural areas
Emissions Reduction	2035	E.g., Reduce energy sector emissions by 50% from 2020 levels
Grid Resilience	2035	E.g., Upgrade grid to support 80% variable renewables

Instructions:

- Align targets with Framework goals (e.g., 60% renewable energy by 2035, 100% by 2050).
- Ensure equity considerations (e.g., prioritize access for underserved communities).
- Validate targets with stakeholders via the [Stakeholder Engagement Protocol](#).

Example: Country X targets 60% renewable energy by 2035, coal phase-out by 2040, and 100% energy access by 2030, with stakeholder input from rural communities and renewable energy firms.

3. Transition Interventions

Outline specific interventions to achieve transition targets, including renewable energy deployment, infrastructure upgrades, and just transition measures.

3.1 Renewable Energy Deployment

Field	Response
Technologies	E.g., Solar, wind, green hydrogen
Capacity Goals	E.g., Add 10,000 MW solar, 5,000 MW wind by 2035
Projects	E.g., 50 community solar farms, 20 offshore wind farms
Timeline	E.g., 2026-2035, 2,000 MW added annually
Funding Source	E.g., Framework finance, private investment

Example: Country X will deploy 10,000 MW of solar and 5,000 MW of wind by 2035, with 50 community solar farms funded by Framework grants and private investment.

3.2 Infrastructure Upgrades

Field	Response
Infrastructure Needs	E.g., Grid storage, smart grids, EV charging networks
Projects	E.g., 1,000 MW battery storage, 500 EV charging stations
Timeline	E.g., 2027-2035, storage operational by 2030
Funding Source	E.g., National budget, green bonds

Example: Country X will install 1,000 MW of battery storage by 2030 and 500 EV charging stations by 2035, funded by green bonds and national budgets.

3.3 Just Transition Measures

Field	Response
Target Group	E.g., 20,000 coal workers, 5 rural communities
Measures	E.g., Retraining for solar jobs, economic diversification (eco-tourism)
Timeline	E.g., 2025-2030, 100% worker support by 2035
Funding Source	E.g., Carbon pricing revenues, Framework finance

Instructions:

- Use the [Just Transition Planning Template](#) to design measures.
- Ensure equity by prioritizing vulnerable groups (e.g., low-income workers, indigenous communities).
- Identify funding via the [Climate Finance Access Navigator](#).

Example: Country X will retrain 20,000 coal workers for solar jobs by 2035 and develop eco-tourism in 5 rural communities, funded by carbon pricing revenues.

4. Implementation Roadmap

Define a phased timeline for implementing interventions, aligned with Framework milestones.

Phase	Timeline	Actions	Milestones
Short-Term	2025-2030	E.g., Deploy 2,000 MW solar, launch retraining for 5,000 workers, achieve 100% energy access	E.g., 30% renewable energy, 100% access by 2030
Medium-Term	2030-2040	E.g., Scale to 10,000 MW solar/wind, phase out coal, upgrade grid storage	E.g., 60% renewable energy, coal phase-out by 2035
Long-Term	2040-2050	E.g., Achieve 100% renewables, sustain new industries	E.g., 100% renewable energy by 2050

Instructions:

- Align with the Framework's Implementation Roadmap (e.g., 60% renewable energy by 2035).
- Coordinate with other sectors using the [Climate-Energy Policy Integration Matrix](#).
- Engage stakeholders to validate timelines.

Example: By 2030, Country X will achieve 30% renewable energy and 100% access; by 2035, 60% renewables and coal phase-out; by 2050, 100% renewable energy.

5. Metrics for Success

Establish indicators to track progress and evaluate outcomes, aligned with the Framework's Integrated Climate Metrics System (ICMS).

Indicator	Target	Measurement Method	Frequency
Renewable Energy Share	60% by 2035, 100% by 2050	Percentage of electricity from renewables	Annual
Emissions Reduction	50% reduction in energy sector emissions by 2035	MtCO ₂ e from energy sector	Annual
Energy Access	100% clean energy access by 2030	Percentage of population with access	Biennial
Jobs Created	10,000 new renewable energy jobs by 2035	Employment records in renewable sector	Annual
Equity Outcomes	80% of vulnerable communities report benefits by 2035	Surveys of rural and marginalized groups	Biennial

Instructions:

- Integrate metrics into ICMS for standardized reporting.
- Use surveys or energy data to assess access, equity, and job creation.
- Report progress via the [Climate Policy Dashboard](#).

Example: Track renewable energy share annually (target: 60% by 2035) and survey rural communities biennially to ensure 80% report benefits by 2035.

Next Steps

1. **Review Results:** Share your roadmap and outcomes with key stakeholders to validate findings and build consensus on priorities.
2. **Develop a Strategy:** Use the roadmap and metrics to integrate the energy transition into your broader climate and energy governance strategy.
3. **Connect to Regional Resources:**
 - Explore the Regional Hub concept at globalgovernanceframework.org/frameworks/hubs to understand how regional coordination can support your energy transition initiatives.
 - Identify existing regional organizations in your area that may provide similar functions to the conceptual Regional Hubs.
4. **Access Support:**
 - Email globalgovernanceframework@gmail.com for technical assistance and to discuss potential regional collaboration opportunities.
 - Inquire about pilot projects or implementation partnerships related to the Regional Hub concept.
5. **Monitor Progress:** Reassess the roadmap annually to track improvements and adjust strategies based on metrics and stakeholder feedback.
6. **Share Insights:** Contribute lessons learned to the Framework's knowledge repository to support global learning and inform Regional Hub concept development.

Contact and Further Information

For additional support:

- **Online Resources:** Access tools and guides at globalgovernanceframework.org/frameworks/tools/energy.
- **Technical Assistance:** Email globalgovernanceframework@gmail.com.
- **Regional Governance Concepts:** Learn more about the Regional Hub framework at globalgovernanceframework.org/frameworks/hubs.
- **Implementation Partnerships:** Inquire about opportunities to pilot Regional Hub functions in your region through globalgovernanceframework@gmail.com.

This template is a living document, updated periodically. Check the website for the latest version.