

# ESMAP Business Plan FY2017-20

**OVERVIEW** 



## **Contents**

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  - D. ENERGY EFFICIENCY

## Key Drivers (1): Sustainable Development Goal 7

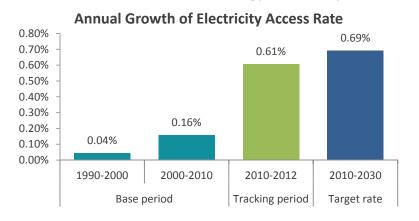
## Ensure access to affordable, reliable, sustainable, and modern energy for all by 2030

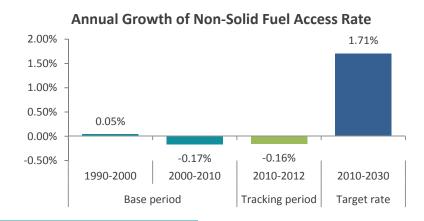
- Ensure universal access to affordable, reliable, and modern energy services;
- Increase substantially the share of renewable energy in the global energy mix;
- Double the global rate of improvement in energy efficiency;
- Enhance international cooperation to facilitate access to clean energy research and technologies, including renewable energy, energy efficiency, and advanced and cleaner fossil fuel technologies, and promote investment in energy infrastructure and clean energy technologies; and
- Expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, particularly LDCs and SIDS.

Also: item 12.c under "Ensure sustainable consumption and production patterns:" Rationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimizing the possible adverse impacts on their development in a manner that protects the poor and the affected communities

## **Strategic Context**

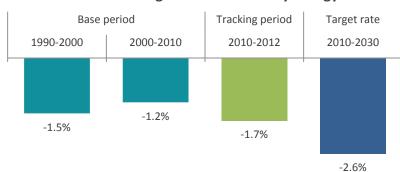
Universal access to modern energy services by 2030: almost on-track for electricity but way off-track for non-solid fuels





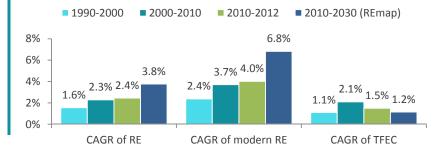
Efficiency indicator accelerates in 2010-2012, but still falls short of target rates

#### **Rate of Change in Global Primary Energy**



Renewable energy consumption accelerated 2010-2012, but still substantially short of what is needed

## Annual Percentage Point Increase of RE and Modern RE Shares

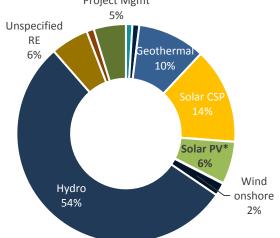


## Key Drivers (2): WBG Climate Action Plan

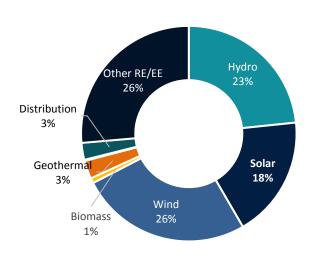
#### Presents a Significant Opportunity to Scale Up Climate Finance

#### WB RE PORTFOLIO BY TECHNOLOGY (FY10-FY15)

Hydro TA, Capactiy Building & Project Mgmt



#### IFC RE PORTFOLIO BY TECHNOLOGY (FY10-FY15)



#### **HISTORICAL**, FY11 – FY15 (annual average)

	USD	% of total commitments
IBRD/IDA	7.84 billion	21%
IFC	1.76 billion	18%
MIGA	0.76 billion	27%

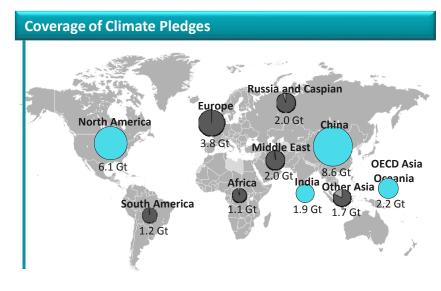
#### **FUTURE, FY16 – FY20**

- Increase by one-third from current levels
- 28% of annual commitments by 2020
- USD 29 billion per year by 2020
  - USD 16 billion (own resources)
  - USD 13 billion (co-financing)

## Key Drivers (3): Paris Agreement & iNDCs

#### HUGE ROLE & IMPLICATIONS FOR ENERGY SECTOR

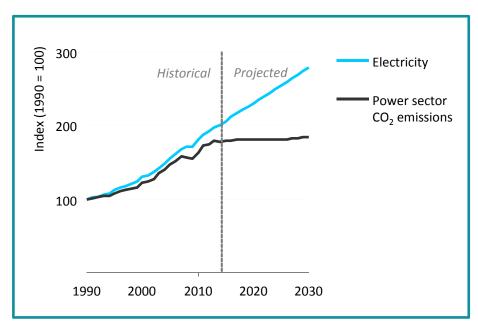
ESMAP work program supports COP21 call to action towards decarbonization and all countries' contributions



Source: IEA 2015, Energy and Climate Change - Special briefing for COP21

- Paris Agreement sets foundation for global transformation to low carbon and sustainable future
  - Long term ambitious goal of keeping temperature rise well below 2oC
- Energy sector central to global action to tackle climate change
  - Paris Agreement calls for "global peaking of GHGs as soon as possible, followed by "rapid reductions" leading to net zero emissions after 2050
- Developed & developing countries agree to contribute to global transformation
  - iNDCs from more than 180 countries, accounting for 95% of global energy-related GHG emissions
  - Collective pledges if all implemented are consistent with a global temperature increase of around 2.7 degrees by 2100, (compared with 3.5 in business-asusual case) (IEA estimate)
- Financial resources to be further mobilized to support developing countries' implementation of iNDCs (energy and other sectors; both mitigation & adaptation)
  - Paris Agreement sets collective floor of \$100 billion per year

## iNDCs: Foundation for Transformational Energy Agenda



Source: IEA 2015

- Around ½ iNDCs include explicit energy-focused targets (either alongside a GHG target or as standalone goal).
  - Most common energy measures: increased renewables and improved energy efficiency
- iNDCs set to reduce power sector emissions growth dramatically (see graph).
  - While global power sector emissions stay flat, electricity demand increases by more than 40% to 2030 ( with increase coming from developing countries).
- In addition, developing country iNDCs highlight targets and actions in several energy-related sectors (that are covered in proposed ESMAP business plan), such as:
  - Cities
  - Clean cooking
  - Buildings
  - Transport (mostly urban transport)
  - Waste management
  - Water & wastewater

## **Business Plan Implementation and Delivering Results**

#### BUILDING ON ESMAP EXPERIENCE

- Strong operational focus is critical for uptake through WB policy dialogue and mobilizing WB lending, development partners and climate finance in new, challenging areas (e.g., on-going: Global Geothermal Development Plan; proposed: PV scale up).
- Developing a center of competency can facilitate global knowledge sharing, catalyze client demand, and help in coordination of existing but fragmented efforts (e.g., on-going: subsidy reform, new: Efficient, Clean Cooking and Heating).
- Forward-looking support in clearly defined niche "gaps" creates new country engagement opportunities (e.g., on-going: RE Resource Mapping; new: VRE Grid-Integration).
- Promoting cross-sectoral collaboration is an effective way to address complex, multi-faceted challenges and enhance implementation capacity (e.g. on-going: Energy Efficient Cities; new: Efficient, Clean Cooking and Heating).
- Harnessing WBG convening power can deliver multi-stakeholder buy-in on global efforts (e.g. on-going: Global Tracking Framework; new: roll-out of multi-tier access framework).
- To build client demand and create space in crowded lending portfolios for new approaches and business lines, support for project preparation and pilots is crucial. In some cases this requires Recipient-executed (vs Bank-executed) activities. New ESMAP Administration Agreement to allow more flexibility in the use of Recipient Execution.

## Linkages in ESMAP Business Plan

#### ESMAP PROGRAMS WORKING TOGETHER WILL MAXIMIZE SYNERGIES

TA Program for Solar
Technologies:
Solar PV Scale up component
supports development
of power generation

...within thematic areas: e.g., Clean Energy

VRE Grid Integration
Supporting grid and
regulatory
environment

Comprehensive country assessments.

Feasibility studies and project structuring

Analysis and dissemination of lessons learnt

Operational support to utilities, operators and distribution companies

Support utilities to define and implement new business models

Regulation and Market Design

Planning for higher VRE shares

...across thematic areas: e.g., CEETI & Urban Poor Electricity Access

EE Cities
Addresses barriers
from city
perspective

Urban energy efficiency diagnostics

Advisory services (e.g. on policy, regulatory and institutional framework

Energy audits and pre-feasibility studies

Operational support

Development of urban poor access expansion plans

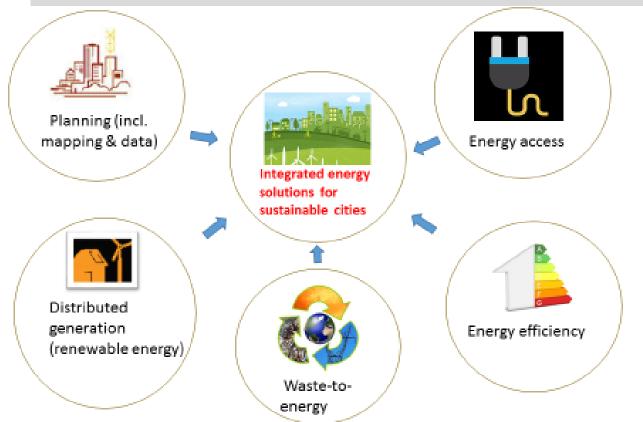
Urban Poor Electricity Access Provides support to electricity supplier

Roster of experts to inform the design of activities

South-south exchanges and "how to" guidance notes

## Example of an integrated approach

MEETING MULTIPLE OBJECTIVES: COST REDUCTIONS, ENERGY SECURITY, RESILIENCE, GREEN GROWTH, JOBS, SUSTAINABLE MUNICIPAL BUDGETS, ENHANCED SERVICE QUALITY, URBAN INCLUSIVENESS...

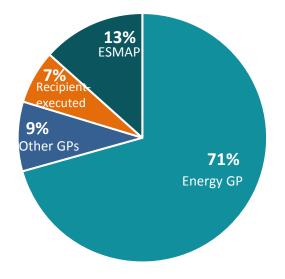


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## **ESMAP Operating Model**

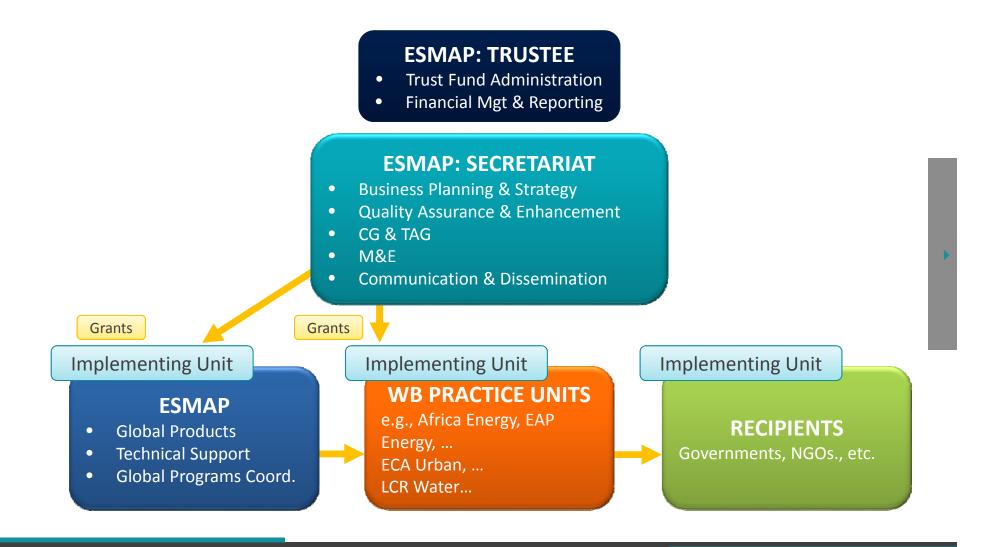
#### IMPLEMENTATION CAPACITY

- Primarily through WB client-facing, regional units
- WB Implementation Capacity includes: ESMAP Staff, Regional energy staff, Regional staff in other GPs: Urban, Transport, Water, Social Protection, Macro/Fiscal, Health, etc.
- New Administration Agreement includes both Bank-execution and Recipient-Execution, expanding implementation capacity to include client counterparts

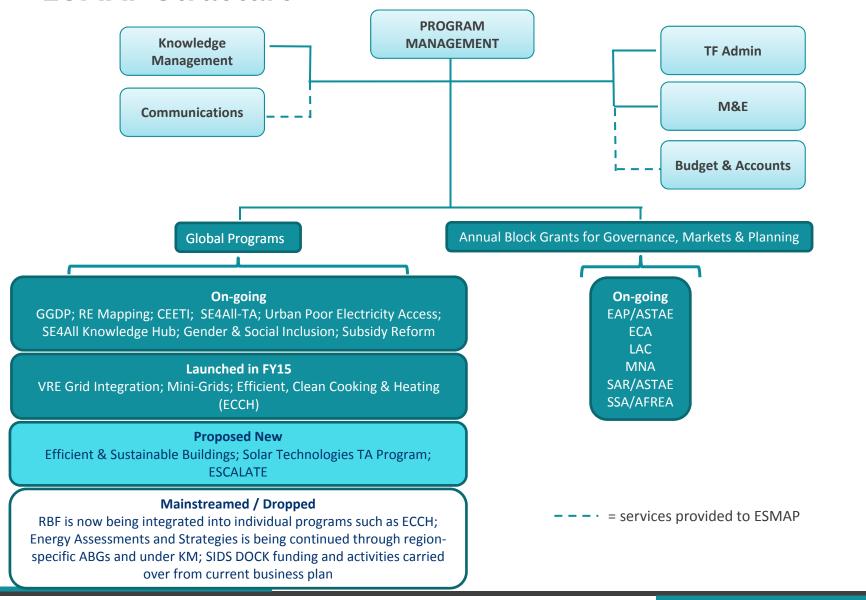


Majority of ESMAP funding (incl. ASTAE, AFREA, SIDS DOCK) is allocated to non-ESMAP units for implementation (FY15 data)

#### **How ESMAP Works**

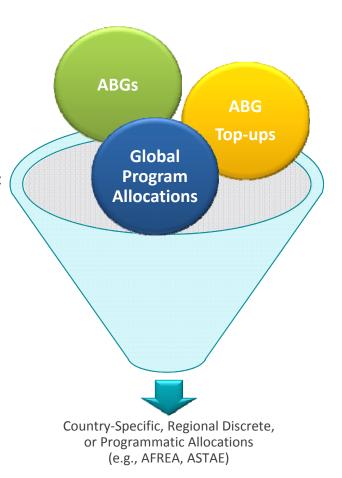


#### **ESMAP Structure**



## Demand-Driven ABGs & Region-Specific "Top-ups"

- Annual Block Grants (ABGs) provide flexible, on-demand funding to regional energy teams to address any energy sector topic within the broad scope of ESMAP's mandate.
- ABGs for Governance, Markets, and Planning + any topics outside the scope of global programs.
- ABG Allocations are determined on a performance-based formula:
  - Region's energy lending volume
  - Total disbursement of region's ESMAP funds
  - Total contribution of Bank Budget to ESMAP activities
  - World Bank lending informed by region's ESMAP activities
  - Results measured as the proportion of a region's activities with at least one observed outcome
- Regional Top-Ups to ABGs will provide additional resources for Africa (AFREA) and East Asia & Pacific and South Asia (ASTAE)
- Other regional top-ups could be considered, subject to availability of funds
- Regional priorities covered by global programs will be funded through global program windows.
- Regions can combine funding from ABG & global program windows for country-specific or regional discrete or programmatic activities (e.g., AFREA)



## All Regions: Governance, Planning, & Markets

- Strengthening utilities, regulation and power system planning.
- Power Sector Reform
  - TA to government bodies, regulators and system operators on effective institutional/governance structures for greater market efficiency and technological innovation
  - regulatory incentives for expanded energy access
  - cutting-edge options for efficient and competitive market design
  - market structures and pricing conducive to VRE integration
  - Private Sector Participation and Transmission and Distribution
- System Planning
  - transfer of tools to clients + training
- Regional Integration of Infrastructure
  - TA to power trade institutions

## Africa (AFR) Priority Areas

- Strengthening utilities, regulation and power system planning.
- Regional integration of electricity infrastructure and trade.
- Renewable energy scale up, particularly hydropower and solar, with associated transmission requirements.
- All aspects of increasing access to electricity (off-grid and grid-connected).
- Facilitating private sector investment.
- Continuation of current successful activities—such as Africa Clean Cooking Energy Solutions
   Initiative (ACCES), Gender and Energy, Lighting Africa, Africa Electrification Initiative which have proven essential to respond to specific challenges and opportunities across countries.
- New Regional Initiative emerging: Geospatial Planning. Based on successful application as the basis for electrification access expansion planning in Rwanda and Nigeria, a "hub-and-spoke" structure is envisaged with a focused Regional Activity complemented by individual country activities.

## East Asia and Pacific (EAP) Priority Areas

- Lao PDR: Promote sustainable hydropower development and improve financial viability in sector; and reduce household air pollution and improve the health of rural population.
- Myanmar: Strengthen power sector management; introduce grid-connected renewable energy systems and improve power dispatch; strengthen planning capacity in gas and hydropower; improve access to electricity and clean household energy; and promote impact evaluation programs.
- Vietnam: promote supply and demand side energy efficiency; improve the financial viability of sector and create competitive power and gas markets; and strengthen renewable energy and diversity of energy supply.
- Philippines: Governance strengthening on corporate and management aspects of electric cooperative sector improve in regulatory framework; support disaster risk management and expansion of solar-as-a-service to help electrification agenda; improve planning and standards; support National Electrification Administration (NEA), including development and implementation of the key performance and governance system.
- Indonesia: energy infrastructure (pumped storage, gas infrastructure); renewable energy and low carbon energy development (geothermal power, hydropower, gas for power); access to modern, reliable energy services (strengthening and expansion of distribution infrastructure, access to clean cooking solutions); cross cutting area of the other three business lines Sector Governance, Competitiveness and Efficiency.
- China: Power and gas sector regulatory reform including pricing and tariffs to increase the efficiency of the sector and the share of renewables on the grid; institutional development and modernization within the energy sector (regulators, system operators, generators, major consumers); support on energy consumption to lower the local air pollution impact (contributions to fine and ultrafine particulates).
- Mongolia: Efficiency and clean energy production and use, including cook stoves and district heating; energy and electricity sector policy and institutional development.
- Pacific Islands: renewable energy resource mapping (solar, wind, small hydro and geothermal assessments; value of lost loads as inputs to economic analysis; support to development of legal, regulatory, policy and institutional frameworks.

## Eastern Europe and Central Asia (ECA) Priority Areas

- Improve access to reliable and efficient energy supply optimize energy supply mix through energy sector planning (power and heating); improve supply efficiency and service quality by assessing policy measures; strengthen domestic and regional power/gas markets through policy, regulatory and institutional reforms to strengthen market liberalization and private sector participation, financial performance of energy utilities; boost regional power and gas market integration options focusing on energy-water linkages.
- Design and implement socially and financially sustainable energy tariff and subsidy reforms cross-sector diagnostic work to assess fiscal costs of subsidies and distributional impact; develop and implement energy tariff and subsidy reform programs and social protection/mitigation measures; effective public outreach campaigns and establish social accountability measures; and increase linkages between tariff reform implementation and energy efficiencies.
- Scaling-up energy efficiency and renewable energy develop/implement scalable energy efficiency programs through financing and delivery mechanisms; improve regulatory, institutional and financial framework; promote development and integration of renewable energy to energy; and promote sustainable cities;
- Support Ukraine on the legislative frameworks for electricity and gas sectors implement gas, district heating and electricity subsidy reforms; design and implement mitigating measures for future tariff increases; unbundle vertically integrated and opaque electricity and gas utilities; and build capacity and establish systems for electricity and gas utilities.

## Latin America and Caribbean (LCR) Priority Areas

- Supporting countries to improve and strengthen energy policy-making environment and institutions
  for energy security and diversifying energy production matrices: includes policy, legal and regulatory
  frameworks to facilitate potential investors assessment of risks/returns; adequate information,
  policies, skills and incentives required to plan and implement clean and climate resilient energy
  systems; capitalizing on competitive solar and wind energy costs to develop more renewables.
- Addressing the last mile of energy equity and quality of access issues: use renewable energy technologies with decentralized micro-grids, focusing on quality of electricity services and providing cooking/heating solutions blending policy, technology and finance.
- Enhancing climate resilience of energy systems: includes assessing energy system vulnerabilities (sea level rise, frequent and extreme weather events) related to climate change impacts and proposing adaptation mitigation interventions to address energy service delivery.
- Enabling financing adapted to a new energy economy: applications of new advisory and financial instruments, and deployment channels to support sound energy systems to unleash equitable value, sustainable and climate resilient framework, initiatives and projects.
- New public-private energy economy: regulated energy activities are challenged by technology advances (ICT & PV); energy systems operate under incomplete market reforms causing competitive weakness and limiting new market entrants to participate in the value creation process.

## Middle East and North Africa (MNA) Priority Area

- Governance, Institutions and Accountability strengthen sector regulatory and institutional framework, enhance accountability of institutions to deliver quality services, and foster private sector participation in infrastructure projects.
- Subsidy Reform and Pricing identify pathways to reform energy subsidies and pricing policies.
- Energy Access access to energy services to underserved population (Djibouti, Yemen, and Gaza)
- Regional Cooperation develop regional and sub-regional electricity, solar, and gas markets.
- Renewable Energy and Energy Efficiency contribute to develop the large untapped potential of renewable energy and energy efficiency in the region.

## South Asia (SAR) Priority Areas

#### Renewable Energy

- India: support in decelerating the carbon-intensive growth path including to enable the country's grid to absorb and evacuate an increased proportion of variable renewable energy, to provide transmission infrastructure for large scale grid connected solar PV, including private developer-led solar parks, and scale up the development of grid connected rooftop solar PV; hydropower including pumped storage.
- Hydropower in Nepal and Pakistan; rooftop solar in Bangladesh and Nepal; wind power development in Sri Lanka
- Sector reform and development of conducive policies in cooperation with other donors;
- Upstream renewable energy mapping supported by ESMAP in Nepal, Pakistan, and Maldives is expected to trigger an increased demand for identification and implementation of new small scale renewable energy projects in these countries, including private sector-led mini-hydro and mini-grid development.

#### **Energy Efficiency**

- both supply- and demand- side.
- Bangladesh: industries and households; Pakistan and India: improving supply side efficiency, enhancing utility performance, and improving the efficiency of dispatch in the power system

#### **Access to Modern Energy Services**

- Electricity access in India, Bangladesh, Nepal, Afghanistan (off-grid as well as network strengthening and expansion;
- Nepal, Bangladesh and India, clean cooking technical assistance activities have been launched, and will require support for operationalization once the pilot activities will have provided the understanding of the best mechanisms to disseminate these technologies.

Regional Integration is a necessary step for political and economic development but remains elusive. a key factor for the realization of the renewable energy potential of the region.

# Shifting from Stand-Alone Gender Program to Mainstreamed across ESMAP's Programs

#### STARTING IN FY17 - How will this be done?

#### **Internal Processes**

- Capacity development of all ESMAP staff on Gender and Social Inclusion (e-learning/clinics/one-on-one)
- Gender integrated in Program Call for Proposals e.g., ABGs, Subsidies, Mini-grids, Energy Efficiency
- Establishing ABG Regional Gender and Energy Programs, replicating AFREA and ASTAE experience
- M&E Continued tracking during implementation, portfolio reviews, and improved monitoring through grantspecific reporting

#### **Gender Technical Inputs**

- Continued collaboration with Social Development and Gender CCSA
- Developing "help desk" with roster of gender experts and training resources available to project teams and clients

#### **Targeted Actions and Outputs**

- Phased and Demand Driven Approach Start with Energy Access Programs and Scoping/Deeper Consultations for other Programs
- Project Clinics, Guidance and Background Notes across topic areas
- Country Level Engagement

## Gender Activities across ESMAP Programs

SE4ALL Knowledge Hub   Gender integrated within Survey of MTF; Gender within GTF Nexus Chapter; Gender & Energy Access Chapter within SEAR	Efficient & Sustainable Buildings   Gender included as part of Background Scoping Paper to prepare program
SE4ALL TA Program   Background note on how gender data and analysis can enhance access planning	<b>EE Project Prep Facility</b>   Call for proposals are gender-informed, and program designs will incorporate gender and social considerations where relevant; Operational Note/Clinics on Gender
<b>ECCH</b>   Integrate gender within country level programs; Part of monetizing co-benefits methodology and approach	<b>Subsidies</b>   Gender and Energy Operational Note and Clinics; Gender within Diagnostic Tool;
Mini-grids   Background note on Gender and Mini-grids and Productive Uses; Country level support	<b>VRE</b>   Ensure adequate consideration of gender aspects in all consultation processes leading to regulatory changes and in the ESIAS of WB lending projects linked to VRE grid integration TA.
Urban Poor   Input to guidance notes and country level support	<b>Geothermal</b>   Support with feasibility studies, surveys or ESIAs where relevant
<b>ESCALATE</b>   Analyze and make available relevant data on markets, policies and business models, including gendersensitive designs	<b>RE Resource Mapping</b>   Promote geospatial planning work that includes environmental, social and gender considerations
<b>Solar Technologies</b>   Background note on gender dynamics related to building supply chains and understanding consumer choices; Input to Project TA and Lighting Global Programs	

## Developing Regional Gender & Energy Programs

#### ABG WINDOW - TARGETED SUPPORT

- Operational Support through AFREA and ASTAE Regional Gender and Energy programs have resulted in gender-informed lending operations, capacity development, new approaches and building a pool of gender and energy operational expertise within the World Bank Group
- Having dedicated funding and experts to screen projects and provide technical input has helped move from advocacy to action
- Based on country level work, operational guides and resources have been developed and an active gender and energy network exists
- ESMAP to replicate this approach in other regions LAC, ECA, MENA and SAR through the ABG
  Window. Programs to be developed with regional Social Development/Gender
  Specialists and gender champions within energy units to ensure its regionally relevant,
  demand driven and systematic. AFREA and ASTAE gender and energy programs to
  serve as models.

## Monitoring and Evaluation

#### KEY ELEMENTS OF ESMAP M&E INCLUDE:

- Annual ESMAP Portfolio Review, which provides an overview of the portfolio's implementation status and assesses outputs outcomes and results achieved during the fiscal year.
- Operation and Maintenance of the ESMAP M&E Portal, which is a web-based platform to enable the input, tracking, analysis and reporting of M&E data for activities funded by ESMAP.
- Quality Assurance for formulation of all baseline and target values, as well as outcomes and output indicators, of ESMAP grant funding requests, to ensure compliance with the ESMAP logframe and M&E standards.
- Input from Technical Advisory Group (TAG).
- Periodic External Evaluation

Budget: \$1-2 m for 4-year business plan

#### **Communications**

#### STRATEGIC, TARGETED, IMPACTFUL

GOALS

- 1. Strengthen ESMAP's position as a global thought leader and as an innovative, results-oriented partner in a changing energy landscape
- 2. Increase ESMAP's impact by improving the dissemination of ESMAP knowledge to key internal and external stakeholders

**OBJECTIVES** 

- 1. Encourage new partners to collaborate with ESMAP and help generate more demand for products
- 2. Increase traffic to ESMAP's website increase visits and downloads
- 3. Increase mentions of ESMAP and its work in various channels, including media and academic publications and others

**STRATEGIES** 

- 1. Provide timely, flexible service to support a growing portfolio and diversity of activities
- 2. Illustrate impact by focusing more on results and ESMAP's transformational impact in terms of influencing policy and leveraging investment bring in real stories from the field that drill down to the beneficiaries
- 3. Solidify the program's narrative with clear messages in the context of COP21 and other global developments
- 4. Reach clients and other key stakeholders with timely, meaningful information to bring about change
- 5. Produce more innovate communications products (infographics, multimedia, video) while continuing the effective existing products such as the e-bulletin. Strengthen use of social media to expand reach.
- 6. Modernize website & publications: redesign website, move into digital publishing (social reading channels)
- 7. Seize opportunities for integration with WB's Energy & Extractives Global Practice to leverage impact
- 8. Strengthen collaboration with ESMAP's KM Team to build efficiencies and streamline processes

## **Knowledge Management**

#### PROCESS TO DEVELOP ESMAP STRATEGY

- A comprehensive survey of all knowledge management activities products and practices in various ESMAP programs.
- Identification of opportunities to enhance knowledge management activities for the Business Plan period (FY17-20) in terms of:
  - How they respond to ESMAP Business Goals;
  - Who are the stakeholders to be influenced and how should they be influenced; and
  - Linkages with initiatives of the wider World Bank Group.
- Develop and Implement an ESMAP Knowledge Management Work Plan covering
  - Printed products;
  - Online products;
  - Processes; and
  - Supporting IT architecture.

Budget for Communications & Knowledge Management: \$4 m for 4-year business plan

#### Innovation Lab

#### To Develop Response to Emerging Needs

#### Context

Energy policy and investment solutions require an increasing level of exploration and research at a time when
a number of factors outside of the sector are influencing it. Those factors include: growing energy price
volatility; rapid technological change impacting energy technologies' efficiency and costs; the increased
dependency of economic systems on reliable electricity supply; or the impacts of climate change on the
resilience of energy delivery systems.

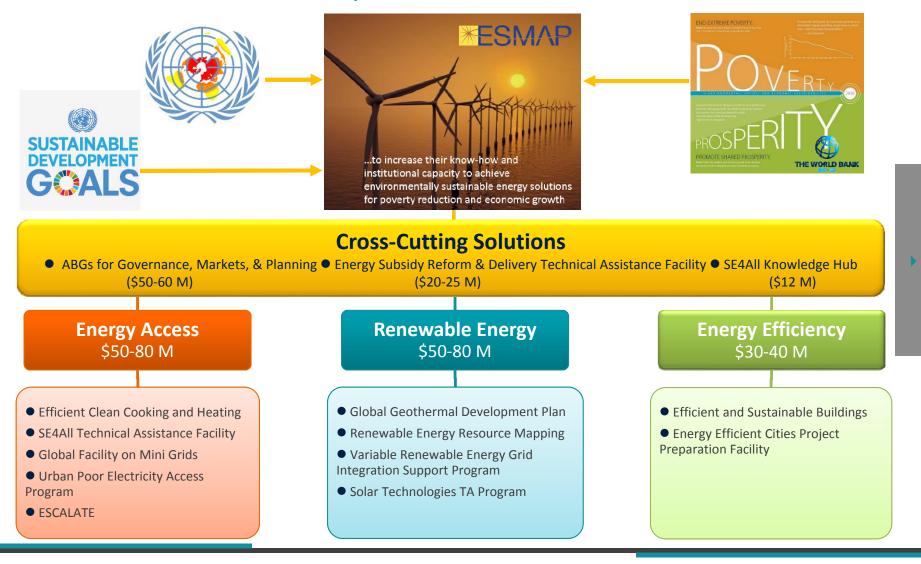
#### **Innovation Lab**

- Aims to Strengthen ESMAP's ability through research, analysis, and piloting to:
  - Provide advance warning of arising policy and investment challenges in the energy sector
  - Pioneer design of innovative solutions for selective challenges
- Examples of emerging needs and challenges:
  - Energy-Food-Water Nexus: deploying "Thirsty Energy" planning tools in client countries; exploring climatesmart agriculture and energy linkages
  - Resilience: Improving reliability of power systems and utilities' resilience to the effects of extreme weather and changing climate; Catalyzing Development of a TA Program, to be jointly financed and implemented with GFDRR
  - Refugees: strengthening energy service solutions for the refugee camp model
  - Energy Return on Energy Invested (EROEI): assessing the impacts of changes in EROEI for economic stability and growth in developing countries

Budget: \$2-4 m for 4-year business plan

## **ESMAP PROGRAMS, FY2017-20**

#### 3 CROSS-CUTTING PROGRAMS & 3 THEMATIC PROGRAMS



## **Global Programs and Objectives**

#### **SUMMARY**

	PROGRAM	OBJECTIVE						
CROSS- CUTTING SOLUTIONS	Annual Block Grants	Increased number of countries with improved energy sector performance						
	SE4All Knowledge Hub	<ul> <li>Global dashboard developed to monitor progress towards the achievement of SDG7</li> <li>Improved availability of data and indicators</li> </ul>						
	Energy Subsidy Reform & Delivery TA Facility	<ul> <li>Increased number of countries that reform energy subsidies, while mitigating the impacts on the poor and vulnerable</li> </ul>						
ENERGY ACCESS	Efficient Clean Cooking and Heating Program	<ul> <li>Increased number of WBG country operations supporting access to cleaner, more efficient cooking and heating solutions</li> </ul>						
	SE4All Technical Assistance Program	<ul> <li>Increased number of low access countries that are enabled to mobilize sector-level financing on the scale required to achieve universal electrification targets</li> </ul>						
	Global Facility on Mini-Grids	<ul> <li>Increased number of WBG operations with scaled-up least cost mini-grids</li> <li>Necessary knowledge base developed</li> </ul>						
	Urban Poor Electricity Access Program	<ul> <li>Increased number of WBG operations where electricity access for the urban poor is mainstreamed</li> </ul>						
	ESCALATE	<ul> <li>Large corporates' engagement in PPPs catalyzed towards achieving universal energy access target</li> </ul>						
	Renewable Energy Resource Mapping	<ul> <li>Increased number of countries with validated maps of renewable energy resources at sufficient scale and quality to support policy planning and commercial development</li> </ul>						
CLEAN ENERGY	Global Geothermal Development Plan	Increased investment pipeline for geothermal resource confirmation						
	Variable Renewable Energy Grid Integration Support Program	<ul> <li>Increased number of countries with strengthened grids to integrate increased share of variable renewable energy</li> </ul>						
	TA Program for Solar Technologies	<ul> <li>Increased number of countries with adequate enabling environments to leverage and accelerate private capital investments in solar technologies</li> </ul>						
ENERGY EFFICIENCY	Sustainable Efficient Buildings	<ul> <li>Increased number of WBG operations with energy efficiency considerations integrated in building sector operations, policies, and country dialogues</li> </ul>						
	Energy Efficient City Services Project Preparation Facility	<ul> <li>Increased number of WBG operations with energy efficiency considerations integrated in urban sector projects in public lighting, transport, water and wastewater, solid waste, power and district energy, and industry</li> <li>Increased mobilization of finance from other development partners</li> </ul>						

## **Overall Funding Proposal**

### **S**UMMARY

	PROGRAM ACTIVITY	Proposed FY2017-20 Funding (\$ million)			
	PROGRAM ACTIVITY	BASE SCENARIO	STRETCH SCENARIO		
	Annual Block Grants	40	48		
CROSS-CUTTING SOLUTIONS	SE4All Knowledge Hub	12	12		
		(incl. 3 carry-over)	(incl. 3 carry-over)		
SOLUTIONS	Energy Subsidy Reform & Delivery TA Facility	20	24		
		(incl. 10 carry-over)	(incl. 10 carry-over)		
	Efficient Clean Cooking & Heating Program	25	40		
	SE4All Technical Assistance Program	12	16		
ENERGY ACCESS	Global Facility on Mini-grids	6	10		
ENERGY ACCESS		(incl. 4 carry-over)	(incl. 4 carry-over)		
	Urban Poor Electricity Access Program	4	10		
	ESCALATE	2	4		
	Renewable Energy Resource Mapping	15	24		
CLEAN ENERGY	Global Geothermal Development Plan	6	8		
CLEAN ENERGY	Variable Renewable Energy Grid Integration Support Program	15	24		
	TA Program for Solar Technologies	22	30		
ENERGY EFFICIENCY	Sustainable Efficient Buildings	10	16		
ENERGY EFFICIENCY	Energy Efficient City Services Project Preparation Facility	15	20		
	Program Management & Administration	4	4		
NON-PROGRAM	Monitoring & Evaluation	1	2		
ACTIVITIES	Knowledge Management & Communications	4	4		
	Innovation Lab	2	4		
	FORMAR TOTAL		300		
	ESMAP TOTAL	(incl. 17 carry-over)	(incl. 17 carry-over)		

## **Indicative Regional Programming Targets**

		Indicative Programming Targets (\$ million)								
	PROGRAM ACTIVITY	GLOBAL	AFR	EAP	ECA	LCR	MNA	SAR	PROPOSED FY2017-20 FUNDING (US\$ MILLION)	
									BASE SCENARIO	STRETCH SCENARIO
CROSS- CUTTING SOLUTIONS	Annual Block Grants		14-19	7-9	4	4	4	7-8	40	48
	SE4All Knowledge Hub	12							12	12
	Energy Subsidy Reform & Delivery TA Facility	2	4-6	2-3	3-4	3	3-4	3	20	24
ENERGY	Efficient Clean Cooking & Heating Program		12-20	4-7	2-3	2-3		5-7	25	40
	SE4All Technical Assistance Program		6-10	1-2		2		2	12	16
	Global Facility on Mini-grids		3-6	1-2		1-2		1-2	6	10
ACCESS	Urban Poor Electricity Access Program		1-4	1-2		1-2		1-2	4	10
	ESCALATE	2-4							2	4
	Renewable Energy Resource Mapping		6-12	4-7		1-5		4-7	15	24
CLEAN	Global Geothermal Development Plan		2-3	1	1	2	0-1		6	8
ENERGY	Variable Renewable Energy Grid Integration Support Program		5-6	2-4	1-2	3-5	2-4	2-4	15	24
	TA Program for Solar Technologies		14-19	2	1-2	2	1-2	2	22	30
FNERGY	Sustainable Efficient Buildings		2	2-5	2-3	2-3	0-2	3-5	10	16
EFFICIENCY	Energy Efficient City Services Project Preparation Facility		2	2-3	4-5	3-4	1-2	3-4	15	20
	Program Management & Administration								4	4
NON-	Monitoring & Evaluation								1	2
PROGRAM ACTIVITY	Knowledge Management & Communications								4	4
	Innovation Lab	2-4							2	4
	PROGRAM TOTAL	18-22	71-109	30-47	18-24	26-37	11-19	32-46	215	300

#### **ESMAP Staff**





# Thank You.



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