

THE RECOVER BETTER WITH SUSTAINABLE ENERGY GUIDE FOR SOUTH ASIAN COUNTRIES



Special Representative
of the Secretary-General for
Sustainable Energy for All



The Recover Better with Sustainable Energy Guide for South Asian Countries

CONTENTS

ACKNOWLEDGEMENT	3
SETTING THE SCENE	4
THE OPPORTUNITIES	7
THE BENEFITS	12
THE ENABLERS	16
TAKING THE RIGHT NEXT STEPS	22
REFERENCES	23

LIST OF FIGURES

FIGURE 1 ELECTRICITY ACCESS GAPS IN SOUTH ASIAN COUNTRIES IN 2018	5
FIGURE 2 CLEAN COOKING ACCESS GAPS IN SOUTH ASIAN COUNTRIES IN 2018	5
FIGURE 3 OPPORTUNITIES IN CENTRALIZED AND DECENTRALIZED RENEWABLES	8
FIGURE 4 OPPORTUNITIES IN THE UPSTREAM VALUE CHAIN	11
FIGURE 5 BENEFITS OF SUSTAINABLE ENERGY FOR ALL	15
FIGURE 6 MAJOR BUILDING ENERGY EFFICIENCY BASED COVID-19 STIMULUS PACKAGES	19

ACKNOWLEDGEMENT

This report was produced by Sustainable Energy for All (SEforALL).

SEforALL would like to thank the following leaders for their valuable input into this guide:

Her Excellency, Ms. Amina J. Mohammed, UN Deputy Secretary-General

His Excellency, Mr. Selwin Hart, Special Adviser to the Secretary-General on Climate Action and Assistant Secretary-General for the Climate Action Team

SEforALL appreciates the inputs from the Energy Division of the UN Economic and Social Commission of Asia Pacific (UNESCAP), in particular:

Michael Williamson, Section Chief

David Ferrari, Economic Affairs Officer

SEforALL is thankful for the valuable suggestions from the South Asia Association for Regional Cooperation (SAARC) Energy Centre, in particular:

Ahsan Javed, Research Fellow (Renewable Energy)

We are grateful to the IKEA Foundation, the Austrian Development Agency, the Ministry of Foreign Affairs of Denmark, the Ministry for Foreign Affairs of Iceland, the Rockefeller Foundation and the Charles Stewart Mott Foundation for their institutional support to our work that has enabled the production of the series.

The Recover Better with Sustainable Energy Guide for South Asian Countries¹

SETTING THE SCENE

The COVID-19 pandemic has impacted populations across the world both directly and indirectly and created challenges to economies and livelihoods that are unprecedented. It is estimated that the global economy could suffer up to USD 8.8 trillion in losses – equivalent to 9.7 percent of global gross domestic product (GDP).² However, with the expectation that the pandemic will continue well into 2021, the full extent of its effects are as yet unknown. The post-COVID-19 global economic environment will be defined by a prolonged recession with high levels of unemployment as countries worldwide seek to reignite their manufacturing, commerce and service industries. In the midst of the COVID-19 pandemic and ensuing economic recovery, governments have a unique, once-in-a-generation opportunity to reset their economies and address the underlying structures that enable development and competitiveness.

Asia is a leader in global development and growth and some of the largest emerging economies are in the region, particularly in South Asia, which is home to more than 1.8 billion people. Countries in South Asia have made positive strides towards achieving the Sustainable Development Goals (SDGs), but the ongoing pandemic risks negating the progress made. It is estimated that 132 million people in South Asia could be pushed into extreme poverty due to loss of jobs and livelihoods as a result of the pandemic and the region's economy is set to shrink for the first time in four decades.³

While Asia as a whole has made significant progress in providing energy in recent years, South Asia still has large populations without access to electricity and clean cooking. Except for Bhutan and the Maldives, countries in South Asia need to increase their efforts in providing electricity access, particularly in rural areas (Figure 1). The region has significantly reduced its electricity access deficits, particularly due to large-scale programmes and efforts by Bangladesh, India and Pakistan. However, as of 2018 there were about 152 million people without access to electricity in South Asia.⁴

¹ South Asian countries for this report are defined as member states of SAARC (South Asian Association for Regional Cooperation), namely: Afghanistan, Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan and Sri Lanka.

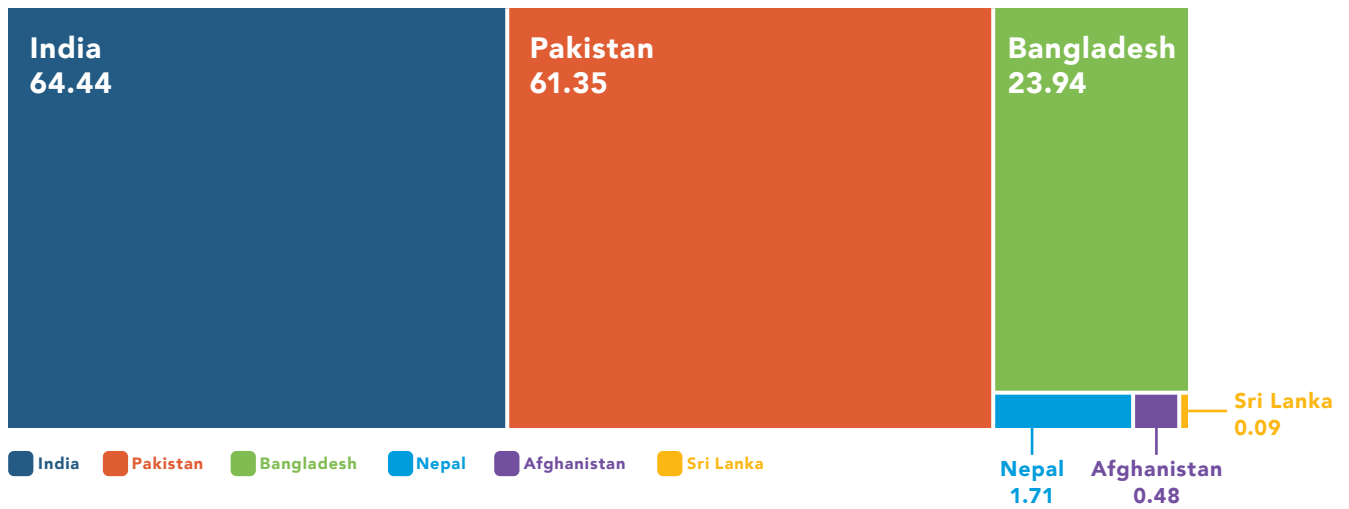
² Asian Development Bank (ADB) 2020, An Updated Assessment of the Economic Impact of COVID-19. Manila. [Link](#).

³ UN Economic and Social Commission for Asia and Pacific (UNESCAP) 2020, COVID-19 and South Asia: National Strategies and Subregional Cooperation for Accelerating Inclusive, Sustainable and Resilient Recovery. [Link](#).

⁴ Tracking SDG 7: The Energy Progress Report 2020. [Link](#).

FIGURE 1

Electricity access gaps in South Asian countries in 2018⁵ (population in millions)

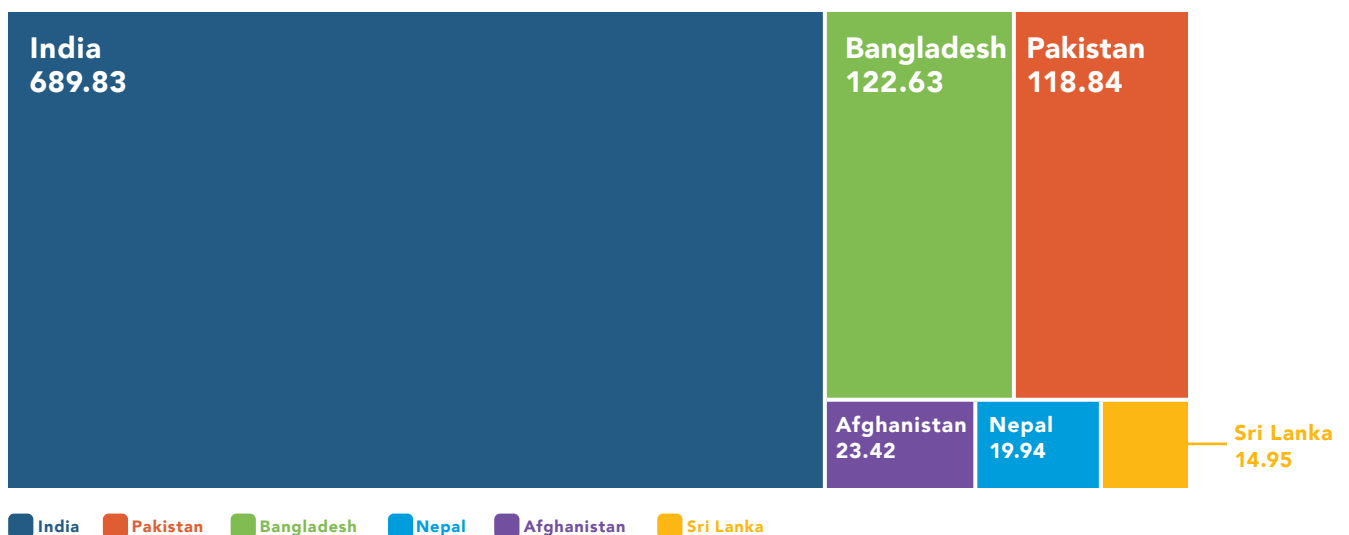


There are an estimated 990 million people in South Asia without access to clean cooking solutions. The Maldives is the only country in the region to have more than 95 percent⁶ access to clean cooking, and while progress has been made by other South Asian countries, much more remains to be done.

FIGURE 2

Clean Cooking access gaps in South Asian countries in 2018

(population in millions)



⁵ Based on Tracking SDG 7: The Energy Progress Report 2020.

⁶ Tracking SDG 7: The Energy Progress Report 2020.

South Asia has reported an economic contraction of about 2.7 percent⁷ in the wake of COVID-19. The region has faced challenges due to the collapse of international trade, reduced export orders, and dwindling tourism, all of which have deeply impacted small and medium-sized enterprises (SMEs). According to a United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) study,⁸ 140 million people from five countries in South Asia might lose their jobs, which are already unstable and informal. There is a need to make businesses more resilient to global shocks. The region has very diverse commerce and industry sectors, ranging from the textile industries of Bangladesh to the tourism hotspots of the Maldives and Nepal, and vast untapped energy efficiency and renewable energy potential that can be leveraged towards making industries more competitive, providing faster electricity access for productive use and creating new value chains and jobs. The uptake of energy efficiency and renewable energy will be critical to accelerating recovery and building resilient economies.

This Recover Better with Sustainable Energy Guide highlights the opportunities, benefits and enablers that will help leaders guide their countries onto a more long-term sustainable and resilient development trajectory. As South Asian countries recover better, they can also lead by example by translating their recovery actions into updated Nationally Determined Contributions (NDCs) under the Paris Agreement.

⁷ UNESCAP based on IMF (2020 b) World Economic Outlook, World Bank (2020a) Global Economic Prospects, and other sources.

⁸ COVID-19 and South Asia: National Strategies and Sub-regional Cooperation for accelerating inclusive, sustainable and resilient recovery, 2020. [Link](#).

THE OPPORTUNITY

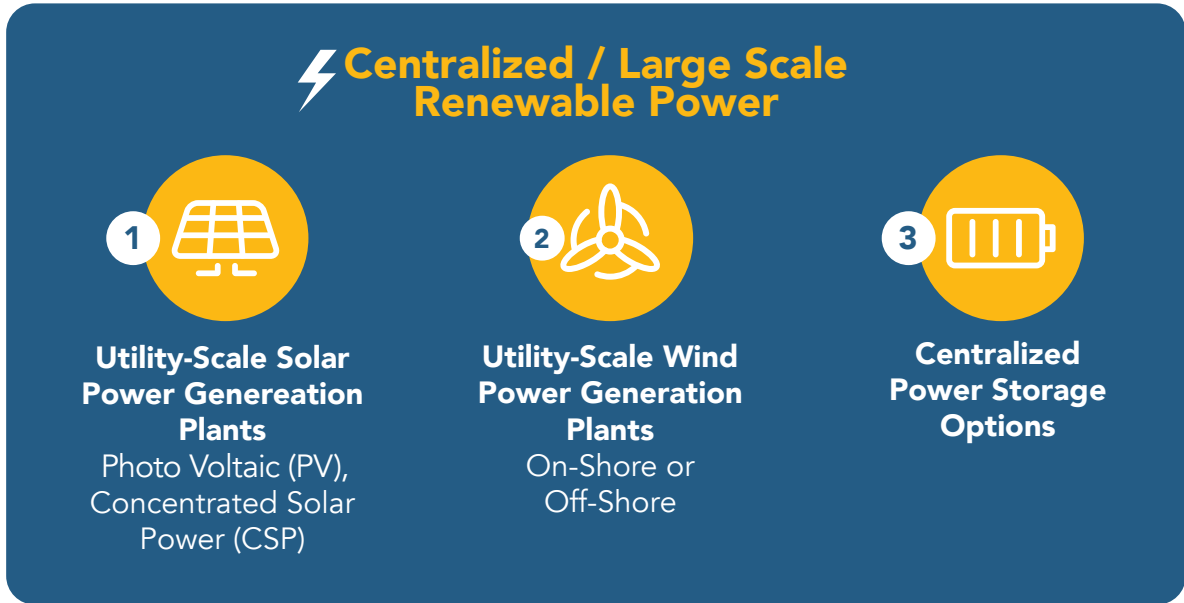
The global economy of the future will increasingly be based on renewable sources of energy and more efficient uses of energy. Countries that take advantage of this moment to rethink their energy supplies will develop a competitive advantage. Countries in South Asia should pursue significant investments in renewable energy and clean cooking in order to close more quickly the energy access gaps, which can create a vast array of socio-economic benefits. Countries need to consider energy efficiency as an important intervention to create sustainable jobs and value addition for businesses.

I. Shifting Investments towards Renewable Energy

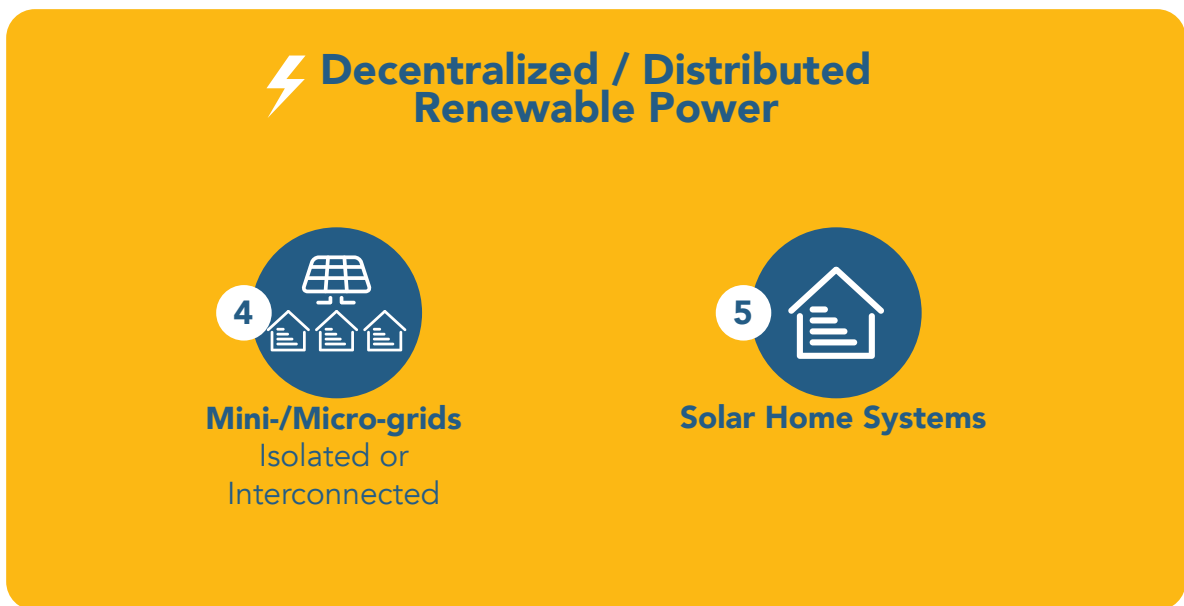
- Shifting investment towards utility-scale and decentralized renewable energy in the region will not only help close electricity access gaps but develop energy security and avoid stranded assets based on fossil fuel infrastructure. In many cases, renewables are the cheapest form of energy, so this shift can be achieved while lowering energy costs. South Asian countries should pursue large-scale investments in renewable energy to increase their share in the energy supply mix of the region. For example, they could aspire to invest 25 percent of their stimulus budgets for on-grid and off-grid renewable energy (a combination of solar, hydro, geothermal and wind) (Figure 3).
- Governments should target direct and indirect investments that can bring down the cost of renewable energy systems considerably. Direct investment includes loan guarantees or contributing capital for the upfront investment. Indirect investments that should be considered include reducing or eliminating import duties and value-added taxes (VAT).

FIGURE 3

Opportunities in centralized and decentralized renewables



GOAL
25%
of stimulus to
renewables



- The investment potential for the renewable energy sector in South Asia between 2018 and 2030 is estimated to be around USD 411 billion.⁹ In 2017, the share of renewable energy in South Asia was about 42 percent¹⁰ but most of this was from biofuels and hydro. While there has been an increased uptake of solar and wind energy projects in the region, with falling technology costs and stronger policies and incentives, the vast technical potential of solar and wind energy remains to be realized.
- Governments in South Asia have been committing more towards renewable energy in their national policy targets, but further efforts are required to develop the enabling policies, institutions and market to attract more investments. COVID-19 stimulus packages for the energy sector should not only be centered around clean energy but also be accompanied by market mechanisms that would incentivize investors and unpack the technological potential of integrating more renewable energy into the grid.

II. Prioritizing Clean Cooking for health and productivity

- Countries in the region should also include support for clean cooking in stimulus budgets, targeting cleaner fuels and the supply chains needed to support the distribution of fuels and stoves as well as public education to increase uptake.
- The use of clean cooking solutions (such as improved cookstoves, induction cooking, etc.) can contribute to fuel cost savings, reduced household air pollution, reduced drudgery related fuel collection, and more productive uses of time.¹¹

III. Energy Efficiency is the cheapest fuel to drive growth

- South Asia has significant untapped potential for energy efficiency that offers the opportunity to create new jobs, build more competitive businesses and lower costs for consumers. Some of the larger economies in South Asia have energy saving potential from 10–20 percent by 2030.¹² If realized, this can result in significant energy and financial savings for countries. For example, it is estimated that energy efficiency interventions in Pakistan could yield savings of USD 10 billion by 2030.¹³

⁹ Climate investment opportunities in South Asia, An IFC analysis, International Finance Corporation 2017.

¹⁰ <https://southasiamonitor.org/spotlight/harnessing-renewable-energy-onus-south-asia>

¹¹ Gender and Livelihoods Impacts of Clean Cookstoves in South Asia Study, Global Alliance for Clean Cookstoves, 2014.

¹² Derived from Energy Efficiency Roadmap for Pakistan, World Bank, 2019 and Demand side energy efficiency opportunities in Bangladesh, World Bank 2017, and Energy Efficiency Potential in India, BEE & GIZ, 2018.

¹³ Energy Efficiency Roadmap for Pakistan, World Bank, 2019.

- Energy efficiency can also make SMEs in the region more competitive and resilient. Stimulus packages that drive investments in energy efficiency could enable various industries to reduce a substantial aspect of their energy costs and enable a faster and more sustainable recovery. For instance, SMEs account for 45 percent of India’s manufactured output and 8 percent of GDP. Tapping into the 15 percent energy savings potential of SMEs could result in avoided fuel imports equivalent to 3.5 million tonnes of oil.¹⁴
- The cooling sector plays an important role in almost all countries in South Asia. Cooling demand is important for thermal comfort in residences and the hospitality sector, as well as for sectors such as agro-food industries and medical cold chains. Meeting the high demand for cooling will require more energy-efficient and climate-friendly solutions while also recognizing the need for access to cooling by 93 million rural poor and 178 million urban poor in the region.¹⁵

IV. Investing in the Local/Regional Value Chain

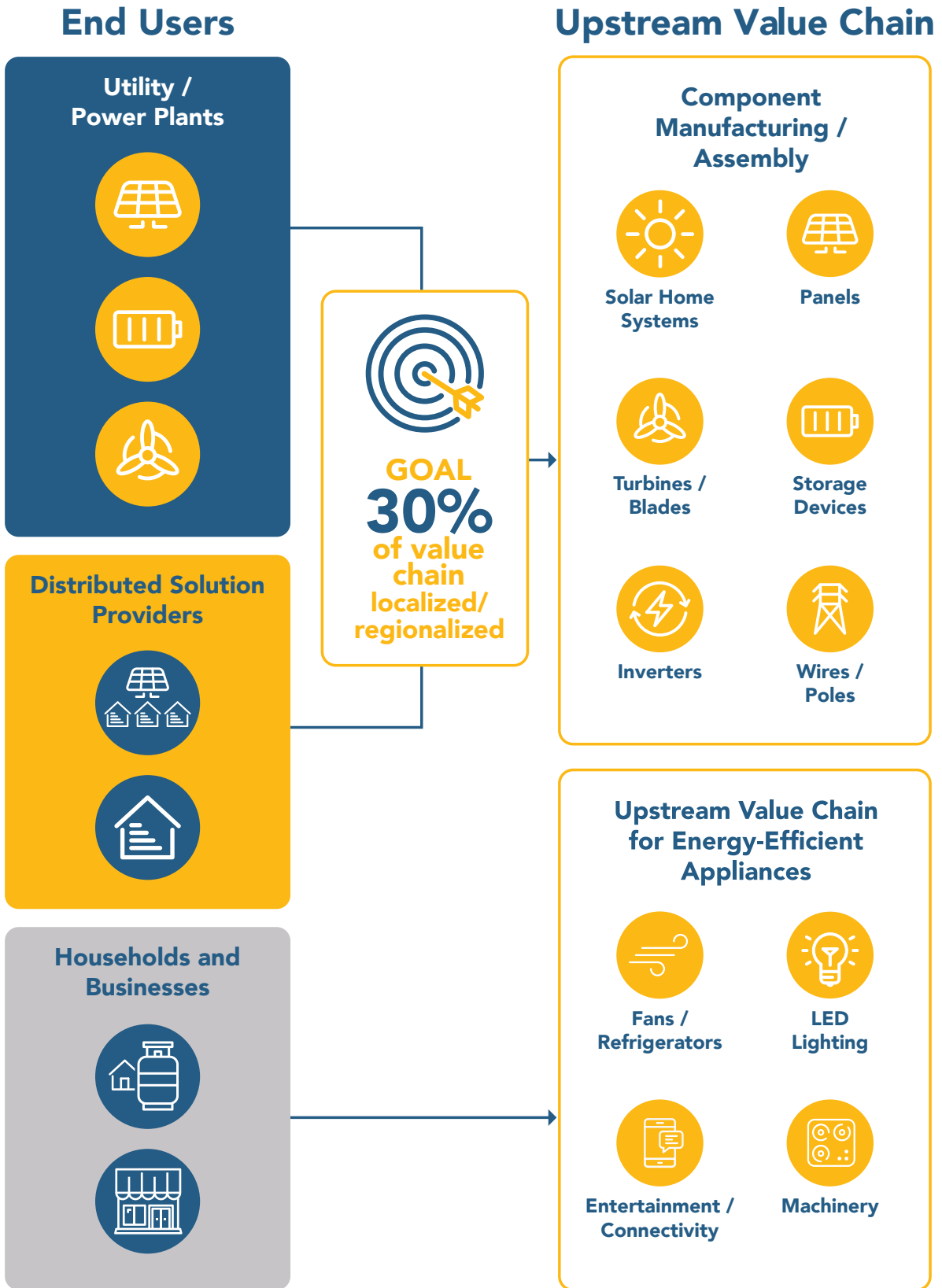
- Investments in sustainable energy should also drive the development of upstream value chains in South Asia, so that countries build local and/or regional manufacturing or assembly of equipment and associated appliances used in renewables, energy efficiency and clean cooking.
- Aspiration targeting of the localization or regionalization of 30 percent of clean energy investment can create upstream and downstream value chains, and it can also simultaneously develop greater energy security (Figure 4). India has pioneered the uptake of renewable energy, particularly solar, through its National Solar Mission and longstanding policy commitments. This has created new facilities and value chains in the country, which have resulted in the creation of new jobs. Furthermore, new ambitions and incentives for electric vehicles and renewable energy integration can present new business opportunities for local/regional enterprises for battery storage and related services.
- The SAARC regional energy cooperation framework should be leveraged to regionalize sustainable energy value chains. With growing demand for energy in South Asia, establishing manufacturing/assembly value chains for renewable energy and energy-efficient solutions would help in reducing costs and increasing energy system resilience. Governments should target direct and indirect investments to operationalize manufacturing and assembly plants for sustainable energy solutions.

¹⁴ actors Influencing the Uptake of Energy Efficiency Initiatives by Indian MSMEs, CEEW and Shakti Foundation, August 2018.

¹⁵ Mainly from Bangladesh, India and Pakistan. Estimates from Chilling Prospects 2020 data, SEforALL.

FIGURE 4

Opportunities in the upstream value chain



THE BENEFITS

Countries that pursue the opportunities of recovering better with sustainable energy will achieve a range of key benefits:

I. GDP multiplier

Investments in energy have a significant GDP multiplier that will benefit the country and its economy.

- It is estimated that for every US dollar invested in the transition towards renewable energy, an additional USD 0.93 of GDP growth above business as usual is expected to occur.¹⁶
- The investment potential for the renewable energy sector in South Asia between 2018 and 2030 is estimated to be around USD 411 billion.¹⁷ If this investment is actualized it could generate an additional GDP impact for the region of USD 382 billion by 2030.
- Providing modern clean cooking access to 30 percent of the currently unserved population is estimated to result in a macroeconomic benefit (economic, health and environment) of USD 15 for every dollar spent.¹⁸

II. Job creation

There is significant job creation potential from both investing in renewable energy and investing in the local supply chain associated with renewable energy. Furthermore, introducing (and enforcing) improved energy efficiency standards for buildings (including retrofitting existing buildings) will trigger the construction industry and cost less than large infrastructure investments.

¹⁶ Derived from Global Energy Transformation – A Roadmap to 2050, IRENA 2019 Edition. [Link](#)

¹⁷ Climate Investment Opportunities in South Asia – An IFC analysis, IFC 2017. [Link](#)

¹⁸ Copenhagen Consensus Network, Galiana Sopinka, Post-2015 Consensus: Energy Assessment. [Link](#)

- For every USD 10 million investment in renewable energy and energy efficiency, approximately two to two and a half times more jobs are created than from the same investment in the fossil fuel industry.¹⁹
- 56 percent of the jobs created by renewable energy projects in South Asia are in rural areas and 27 percent are taken up by women.²⁰

III. Cheaper energy provision

Increasingly, electricity generated from renewable technologies costs the same or less than fossil fuel alternatives.

- Renewables are now the most cost-effective new source of electricity in almost every country in the world.²¹
- The levelized cost per unit of electricity (LCOE) from new utility-scale solar photovoltaic (PV) power plants has dropped about 90 percent over the last decade.²² India reported the lowest LCOE in the world for solar PV in 2019.²³

IV. Improved health and agricultural outcomes

Countries that have not yet achieved universal energy access should consider energy investments alongside those in specific important sectors, namely health and agriculture. These countries will also see significant secondary benefits from more reliable access to energy in the health and agriculture sectors.

- Every dollar spent by governments on health between 2008 and 2010 in 25 EU countries had a multiplier effect of adding USD 3.61 to GDP²⁴ and resulted in a significant reduction in morbidity and mortality. Increased government spending in healthcare has improved health outcomes in South Asia but more resources and efficient allocation are required to reach OECD health standard levels.²⁵
- Reliable electricity can be an effective tool in improving core components of health systems. Electrified primary healthcare facilities enable the use of critical medical equipment and provide safe storage for vaccines.²⁶

¹⁹ Heidi Garette Peltier. "Green versus brown: Comparing the employment impacts of energy efficiency, renewable energy, and fossil fuels using I-O model", *Economic Modelling* pp 434–47, 2017.

²⁰ Renewable Energy and Jobs Annual Review – 2019, IRENA 2019. Link

²¹ Carbon Tracker, COVID-19 and the Energy Transition. Link, 7 April 2020.

²² Lazard: Levelized Cost of Energy and Levelized Cost of Storage 2018.

²³ IRENA Solar cost dashboard <https://www.irena.org/Statistics/View-Data-by-Topic/Costs/Solar-Costs>

²⁴ Reeves et al. *Globalization and Health* 2013, 9:43 pg. 11.

²⁵ Rahman, M.M., Khanam, R. & Rahman, M. Health care expenditure and health outcome nexus: new evidence from the SAARC-ASEAN region. *Global Health* 14, 113 (2018). <https://doi.org/10.1186/s12992-018-0430-1>

²⁶ Chen, Y.J., Chindarkar, N. & Xiao, Y. Effect of reliable electricity on health facilities, health information, and child and maternal health services utilization: evidence from rural Gujarat, India. *Journal of Health, Population and Nutrition* 38, 7 (2019). <https://doi.org/10.1186/s41043-019-0164-6>

- Access to just one piece of electrical processing equipment can increase agricultural yields for smallholder farmers by 30 percent. Access to energy also enables access to information for farmers to guide planting decisions and improve their agricultural productivity. By delivering access to energy and sustainable cold chains, a quarter of food losses can be avoided.²⁷ The region has a sizable electricity demand for agriculture production and the use of solar-powered submersible pump-sets has significant energy and economic saving potential.

V. Improved gender outcomes

Investing in sustainable energy and energy access can ensure benefits to women who have been impacted the worst by the pandemic.

- Wages for women with access to energy are 59 percent higher than those without, a gain that puts women on equal footing with men in terms of remuneration.²⁸
- Women represent about 32 percent of the renewable energy workforce versus just 22 percent for the oil and gas industry, and the renewable industry is more appealing to women.²⁹
- Switching to clean cooking solutions can free up time for more productive activities and foster benefits for women. In South Asia, women with improved cookstoves save 70 hours per year, which has increased their involvement in social and family activities. Furthermore, households with clean cookstoves reported sending their children to school more often as a result of less time and support needed to collect firewood.³⁰

²⁷ Institute for Mechanical Engineers (2014). A tank of cold: Cleantech leapfrog to a more food secure world, London, England.

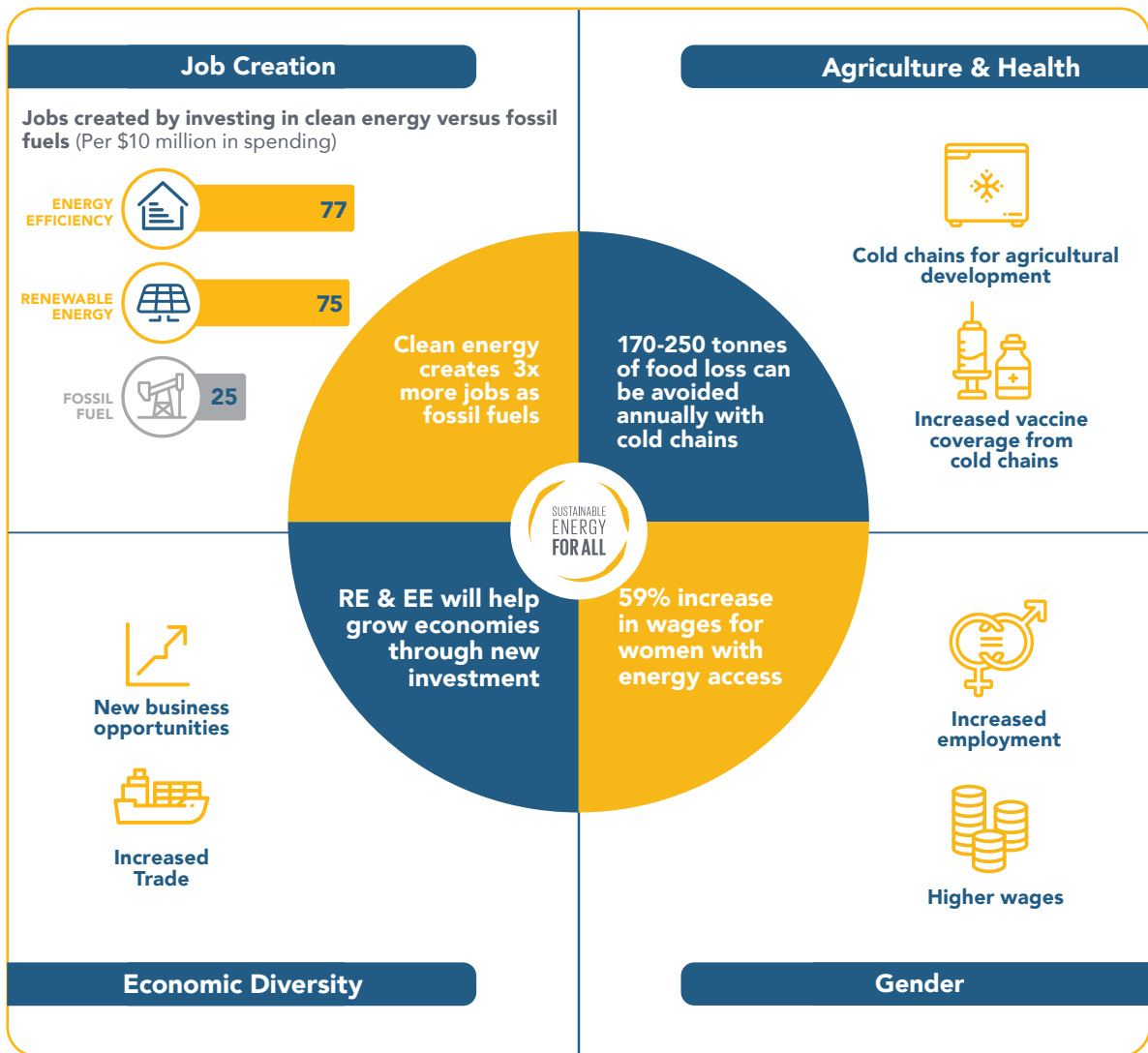
²⁸ Rewald, Rebecca, "Energy and Women and Girls: Analyzing the Needs, Uses, and Impacts of Energy on Women and Girls in the Developing World," Oxfam Research Backgrounder series (2017)

²⁹ IRENA 2019. Renewable Energy Jobs Report. [Link](#)

³⁰ Gender and Livelihoods Impacts of Clean Cookstoves in South Asia Study, Global Alliance for Clean Cookstoves, 2014. [Link](#).

FIGURE 5

Benefits of sustainable energy for all



THE ENABLERS

As countries seek to recover better from the COVID-19 pandemic, there are eight key dimensions that need to be established in order to ensure a successful transition and execution:

I. Ease of doing business. Several measures can be put in place to ensure that investments in sustainable energy and energy access are driven as fast as possible. This includes simplifying procedures, ensuring uniform and transparent policies, and reducing the number of permits and the time it takes to get them for renewable energy and clean cooking equipment and appliances.

- Countries that make it easier to do business increase entrepreneurship and generate jobs, incomes and government revenue.³¹
- The South Asia region needs to improve its performance in its ease of doing business, including for the electricity sector. In international rankings for ease of doing business, India (63), Nepal (94), Sri Lanka (99) Pakistan (108), and Bangladesh (168) have improved their rankings in recent years. However, Afghanistan, Bhutan and the Maldives have moved to lower rankings.³² More improvements in terms of contract enforcement are needed to attract much needed clean energy investments.

II. Robust policies and institutions in support of renewables and energy efficiency.

In order to effectively deliver this approach, governments need to work to establish or empower institutions such as regulators and rural electrification agencies and ensure the right frameworks are in place to successfully drive the development of renewables, energy efficiency, increased electrification and increased access to clean cooking.

³⁰ World Bank (2019). Doing Business 2020: Sustaining the pace of reforms. Link

³¹ Estimated from accessing data of <https://tradingeconomics.com/india/ease-of-doing-business>

- The SAARC energy cooperation framework can be further strengthened for efficient resource utilization of the region to meet electricity load demand. All the countries involved in the electricity trade in South Asia can gain in terms of economic value in the case of cross-border electricity trade. For example, the cross-border power trade is currently about 5,000–6,000 MW and is expected to almost triple to about 15,000 MW by 2030 creating investment opportunities of almost USD 5.8 billion.³³ Coordination amongst the South Asian countries at regional and international levels continues to be an important element in a successful energy transition. The harmonization of policies and standards reduces costs and unlocks investments at larger scale; cross-border power trade provides a range of technical, economic and environmental benefits, and sharing of data, learning and experiences reduces risk and encourages ambition.
- India’s consistently improving policy and regulatory framework has also led to an increase in financing, with the country seeing a jump from USD 7.8 billion in energy access finance in 2013–14 to USD 16.6 billion in 2017.³⁴ India has also set an ambitious renewable energy capacity addition target of 450 GW by 2030 while the total installed capacity in India at present is 370 GW.³⁵
- In Pakistan, the National Energy Conservation Centre was created in 1986, and was subsequently established as the National Energy Efficiency & Conservation Authority (NEECA) through an Act in 2016 under Pakistan’s Ministry of Power. The creation of NEECA and passing of the NEECA Act was an important step as it provided the legislative framework to develop and implement energy efficiency programmes in Pakistan. NEECA is currently managing programmes such as standards and labelling, an energy conservation fund³⁶ and certification of energy manager/auditors to increase the uptake of energy efficiency in the country.³⁷

³³ Energyworld, from the Economic Times, March 2020. Link (exchange rate used 1 USD = INR 0.013).

³⁴ SEforALL (2019) Energizing Finance research series.

³⁵ The Economic Times, 31 January 2020. Link

³⁶ Initial seed funding of USD 3 million provided from Global Environment Facility (GEF) grant. <https://neeca.gov.pk/Detail/YzE2N2E0YjYtZjY1Zi00YzYwLTkwYWltZDRlMGNmZTNiOGU0>

³⁷ Improving EE in South Asia, ADB Working Paper Series, 2016 <https://www.adb.org/publications/improving-energy-efficiency-south-asia> and NEECA website <https://neeca.gov.pk/index>

- Across South Asia, lack of access to clean cooking causes about 8,700 deaths per year due to household air pollution. To address this challenge, the Government of Nepal established clear clean cooking targets within the framework of its 2018–2028 “Energy Decade” policy. Nepal’s Alternative Energy Promotion Centre (AEPC) has been successful in supporting the deployment of more than 1.3 million improved cookstoves, 400,000 biogas plants and around 600 solar cookers throughout the country. AEPC also implements the government’s Renewable Energy Subsidy Policy, which includes clean cooking solutions.³⁸ Policymakers should continue to focus efforts in this area while ensuring that the approaches are reviewed to employ up-to-date best practices.

III. Investment in energy efficiency. Investment in energy efficiency creates jobs, reduces the need to build more power plants and is the cheapest way to reduce emissions.

- Every USD 1 million invested in retrofitting buildings to improve energy efficiency will create approximately 16–21 jobs.³⁹
- In 2009, India established Energy Efficiency Services Limited (EESL) – a public sector super ESCO – to invest and unlock the huge energy efficiency market potential in the country. EESL’s LED distribution scheme – the “Ujala Scheme” – that started in 2015 has provided affordable and energy-efficient LED bulbs to consumers, distributing 362 million LEDs and avoiding about 9,427 MW of peak demand energy usage.⁴⁰

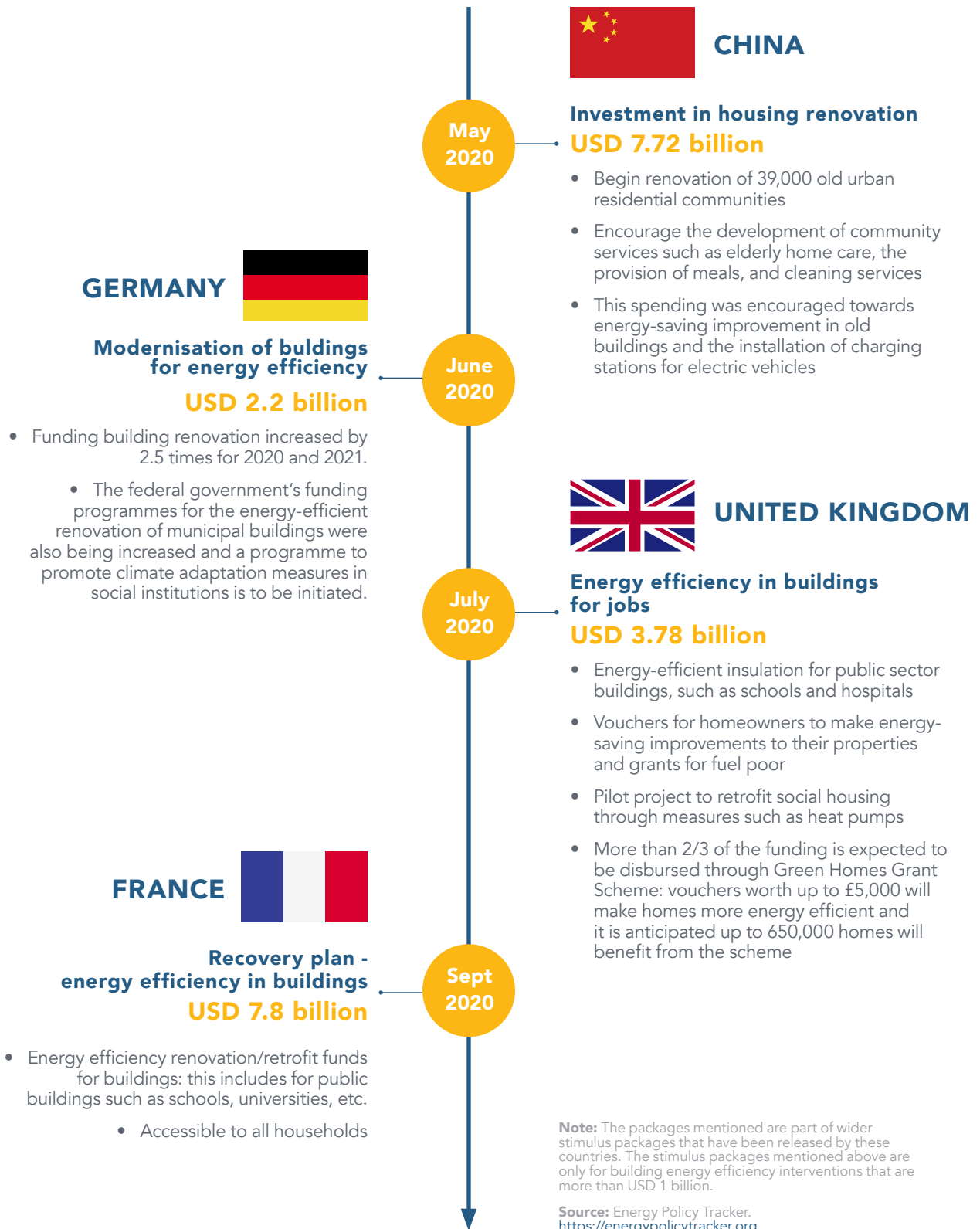
³⁸ SEforALL 2020, Lack of clean cooking access: the ‘other’ public health crisis we cannot ignore. [Link](#)

³⁹ McKinsey & Company, “How a post-pandemic stimulus can both create jobs and help the climate” 27 May 2020. [Link](#)

⁴⁰ Ujala Scheme Dashboard. [Link](#)

FIGURE 6

Major building energy efficiency based COVID-19 stimulus packages



IV. Investment in data. Countries can support rapid investments in renewables, electrification and clean cooking through the effective provision and availability of data to help develop markets. This includes information on optimal renewable sites, communities that are optimally positioned for commercial investments in electrification and adoption and impact of clean cooking solutions.

- Investment in better data that can benefit all market actors will pay dividends over the long run. Clear indications on least-cost solutions for energy access will help pave the way for private sector developers and financiers.
- In Sri Lanka, Lanka Electricity Company (LECO) took over the country's network from the municipalities in 1983 with a loss level of about 33 percent, the result of years of neglect and underinvestment. With efforts such as smart metering for bulk consumers and improving accurate data capturing, LECO now has the best records of reduced distribution losses in the region.⁴¹

V. Move towards cost-reflective tariffs. There are political incentives in many countries that favour reducing the cost of electricity to the consumer, but this should be avoided. Electricity is largely consumed by wealthier residential or industrial/commercial clients. Approaches are needed to ensure that the poor are protected from tariff increases without reducing the tariff for all customers.

- Governments should move towards cost-reflective tariffs. Allowing cost-reflective tariffs also allows utilities to perform better and increases investments in energy access and clean energy.

VI. Elimination of fossil fuel subsidies. Governments should take the opportunity to eliminate fossil fuel subsidies. When the price of oil is lower, governments can float liquid fuel prices, which could result in an immediate benefit for consumers. When the price of fossil fuels rises again, governments should refrain from re-introducing the subsidy.

- With a 1.2 percent global increase in green investment and a mere 0.4 percent decrease in fossil fuel investments, valuable jobs can be created, and the world can be on track to achieve the Paris Agreement.⁴²
- Total direct subsidies for all energy sources reached at least USD 634 billion globally in 2017, with 70 percent of those directed towards fossil fuels. The supply-side subsidies for renewable energy (both power generation and

⁴¹ Improving Energy Efficiency in South Asia, ADB Working Paper Series, 2016.

⁴² Climate Analytics (2020). Climate Action Tracker: Update, April 2020.

transport) were estimated at just USD 167 billion in 2017.⁴³ Countries could take this moment to remove subsidies from the fossil fuel sector and use those funds for green recovery packages.

VII. Declare a moratorium on new coal-fired power. For power generation, over half of all coal plants currently in operation cost more to run than building new renewables.⁴⁴ New investments in renewables are more economical than new investments in coal, which would make future coal-based power plants stranded assets. At this point, any investment in new coal-fired power carries high risk and when fossil fuel subsidies exist, these are counter-productive from both an economic and an environmental standpoint.

- According to a new global analysis, the health and environmental benefits of exiting coal vastly outweigh the costs. By 2050, a coal exit can save 1.5 percent of global economic output, equivalent to USD 370 for every person on the planet.⁴⁵
- In China, 70 percent of the operating coal fleet costs more to run than building new onshore wind or utility-scale PV.⁴⁶
- Due to the falling prices of renewable energy, the average coal unit in Indonesia, the Philippines and Vietnam is only expected to be viable for 15 years, far less than the forty-year assumptions often associated with coal plant lifetimes. This could risk up to USD 60 billion in stranded values of such coal units.⁴⁷

VIII. Investment in people to ensure access to jobs. As governments seek to take advantage of the job creation potential of recovering better, concurrent investments in human capital will be required in order to ensure that there is a talent pool that can meet needs as local industries are established.

- Technical, business and entrepreneurship training are all necessary to localize industry and meet the needs of what could be a sizeable domestic market. Governments also need to invest in the people within their institutions tasked with developing and implementing energy programmes. This includes but is not limited to regulators, state-owned utilities, and implementing agencies and ministries.

⁴³ IRENA 2020 Energy Subsidies: Evolution in the Global Energy Transformation to 2050.

⁴⁴ Carbon Tracker: How to waste over half a trillion dollars: The economic implications of deflationary renewable energy for coal power investments. March 2020. [Link](#)

⁴⁵ Potsdam Institute for Climate Impact Research. Coal Exit Benefits Outweigh its Costs. March 2020. [Link](#)

⁴⁶ Carbon Tracker: How to waste over half a trillion dollars: The economic implications of deflationary renewable energy for coal power investments. March 2020.

⁴⁷ Carbon Tracker Press release, October 2018. [Link](#)

TAKING THE RIGHT NEXT STEPS

The benefits of recovering better with sustainable energy for all are clear: a demonstrable return on investment, a more resilient economy, healthier populations and a cleaner environment.

Governments across South Asia are taking unprecedented steps to respond to the immediate health and economic impacts of COVID-19. Today's decisions will impact tomorrow's ability to recover better over the long term. There are important measures governments can take to recover better by delivering sustainable energy for all while also growing resilient economies and creating new green jobs. Moreover, every investment to recover better reflects greater ambition towards the Paris Agreement that can be reflected in the 2020 review of Nationally Determined Contributions (NDCs). The SAARC energy cooperation framework should be further strengthened to promote sustainable energy investment and policies in the region. The institutional cooperation between the governments of South Asia through this framework would be an important factor to build back towards greener and more resilient economies.

These ideas can be turned into action with committed leadership and drive towards greater long-term competitiveness. They can be started by providing a whole-of-government mandate to prioritize and implement the enabling measures necessary to recover better. This includes empowering Ministries of Finance, Budget and Planning to make the necessary investments in sustainable energy projects that create jobs and that can jump-start their economies.

REFERENCES

- ADB (Asian Development Bank). 2020. An Updated Assessment of the Economic Impact of COVID-19. <https://www.adb.org/publications/updated-assessment-economic-impact-covid-19>
- ADB. 2016. Improving Energy Efficiency in South Asia. <https://www.adb.org/publications/improving-energy-efficiency-south-asia>
- Bloomberg News. 2020. Oil Crashes to 18-Year Low with Broken Market Drowning in Crude. <https://www.bloomberg.com/news/articles/2020-03-29/oil-plummets-to-17-year-low-as-virus-threatens-demand-slump> 30 March 2020.
- Carbon Brief. 2020. Coronavirus: Tracking how the world's 'green recovery' plans aim to cut emissions. <https://www.carbonbrief.org/coronavirus-tracking-how-the-worlds-green-recovery-plans-aim-to-cut-emissions> 16 June 2020.
- Carbon Tracker. 2018. Cheaper to build new renewables than run existing coal plants within 10 years' time in South-east Asia. <https://carbontracker.org/cheaper-to-build-new-renewables-than-run-existing-coal-plants-within-10-years-time-in-south-east-asia/>
- Carbon Tracker. 2020. COVID-19 and the Energy Transition: Crisis as midwife to the new. <https://carbontracker.org/covid-19-and-the-energy-transition/>. 7 April 2020.
- Carbon Tracker. 2020b. How to waste over half a trillion dollars: The economic implications of deflationary renewable energy for coal power investments. <https://carbontracker.org/reports/how-to-waste-over-half-a-trillion-dollars/>
- Chen, Y.J., Chindarkar, N. & Xiao, Y. 2019. Effect of reliable electricity on health facilities, health information, and child and maternal health services utilization: evidence from rural Gujarat, India. *J Health Popul Nutr* 38, 7. <https://doi.org/10.1186/s41043-019-0164-6>
- Climate Analytics. 2020. Climate Action Tracker. <https://climateactiontracker.org/>
- Climate Trends. 2019. Major Indian states could declare no new coal. <https://indiaclimatedialogue.net/2019/12/06/indian-states-signal-beginning-of-no-new-coal/>. 6 December 2019.
- Clean Cooking Alliance. 2014. Gender and Livelihoods Impacts of Clean Cookstoves in South Asia Study. <https://www.cleancookingalliance.org/binary-data/RESOURCE/file/000/000/363-1.pdf>
- Clean Cooking Alliance. 2020. India overview. <https://www.cleancookingalliance.org/country-profiles/focus-countries/5-india.html>
- Coldrey, Olivia. Sustainable Energy for All. 2020. Lack of clean cooking access: the 'other' public health crisis we cannot ignore. <https://www.seforall.org/news/lack-of-clean-cooking-access-the-other-public-health-crisis-we-cannot-ignore>

COBENEFITS Project. Future skills and job creation through renewable energy in Vietnam. <https://www.cobenefits.info/resources/future-skills-and-job-creation-through-renewable-energy-in-vietnam/>. 18 December 2019.

Copenhagen Consensus Center. 2014. Benefits and Costs of the Energy Targets for the Post-2015 Development Agenda, Post-2015 Consensus. https://www.copenhagenconsensus.com/sites/default/files/energy_assessment_-_galiana_and_sopinka_0.pdf

Djoni H., Sasmita H.H., Alin H., Atina S., Aria F.M., Vitria I. 2020. Comparing the impacts of fossil and renewable energy investments in Indonesia: A simple general equilibrium analysis. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7276433/>

Energy Efficiency Services Limited India <https://www.eesindia.org/>

Energy Efficiency Services Limited India. 2020. National Ujala Dashboard. <http://www.ujala.gov.in/>

Garrett-Peltier, Heidi. 2017. Green versus brown: Comparing the employment impacts of energy efficiency, renewable energy, and fossil fuels using an input-output model. <https://www.sciencedirect.com/science/article/abs/pii/S026499931630709X>

Government of India, Ministry of Petroleum and Natural Gas. <https://www.pmuy.gov.in/about.html>

Government of India, Ministry of Power, 17 April 2020, NO42/6/2100-R&R (Vol-VIII) https://www.prsindia.org/sites/default/files/bill_files/Draft_Electricity_Amendment_Bill_2020_for_comments.pdf

Government of India, Ministry of Power. National Ujala Dashboard. <http://www.ujala.gov.in/>

Hans, F et al. 2020. The Mongolian Electricity Sector in the Context of International Climate Mitigation Efforts, The New Climate Institute & GIZ. https://newclimate.org/wp-content/uploads/2020/03/Decarbonization_Pathways_Mongolia.pdf. March 2020

IEA (International Energy Agency). 2019. Clean Energy Transitions Programmes Annual Reports 2018. <https://www.iea.org/reports/clean-energy-transitions-programme-2018>. Paris.

IEA. 2020. Clean Energy Transitions Programmes Annual Reports 2019. <https://www.iea.org/reports/clean-energy-transitions-programme-2019>. Paris.

IEA. 2018. Energy Efficiency, 2018: Analysis and Outlook to 2040. <https://www.iea.org/reports/energy-efficiency-2018>. Paris.

Institute for Mechanical Engineers. 2014. A tank of cold: Cleantech leapfrog to a more food secure world. https://asf.imeche.org/docs/default-source/1-oscar/reports-policy-statements-and-documents/a-tank-of-cold---cleantech-leapfrog-to-a-more-food-secure-world.pdf?sfvrsn=7aece12_0

IFC (International Finance Corporation). 2017. Climate Investment Opportunities in South Asia: An IFC Analysis. <https://www.ifc.org/wps/wcm/connect/fa3bea68-20f1-4cb4-90b9-3e812d38067f/Climate+Investment+Opportunities+in+South+Asia+-+An+IFC+Analysis.pdf?MOD=AJPERES&CVID=IraVua>. Washington.

IRENA (International Renewable Energy Agency). 2018. Global Energy Transformation: A Roadmap to 2050. <https://www.irena.org/publications/2018/Apr/Global-Energy-Transition-A-Roadmap-to-2050>. Abu Dhabi.

IRENA. 2020. Energy Subsidies: Evolution in the Global Energy Transformation to 2050. <https://www.irena.org/publications/2020/Apr/Energy-Subsidies-2020>. Abu Dhabi.

IRENA. 2017. Renewable Energy Benefits: Leveraging Local Capacity for Solar PV. <https://bit.ly/38RCJz>. Abu Dhabi.

IRENA. 2018. Renewable Energy Market Analysis – South Asia. <https://irena.org/publications/2018/Jan/Renewable-Energy-Market-Analysis-South-Asia>. Abu Dhabi.

IRENA. 2019. Renewable Energy and Jobs – Annual Review 2019. <https://www.irena.org/publications/2019/Jun/Renewable-Energy-and-Jobs-Annual-Review-2019>. Abu Dhabi.

IRENA. 2016. Solar PV in Africa: Costs and Markets. <https://bit.ly/3ejJghm>. Abu Dhabi.

IRENA. 2020. Solar Costs Dashboard. <https://www.irena.org/Statistics/View-Data-by-Topic/Costs/Solar-Costs>. Abu Dhabi.

IEA, IRENA, UNSD, World Bank, WHO. 2020. Tracking SDG 7: The Energy Progress Report. World Bank, Washington DC. © World Bank. License: Creative Commons Attribution—Non-Commercial 3.0 IGO (CC BY-NC 3.0 IGO).

Joshi, Anshul. 2020. South Asian power grid will require an investment of Rs 45,000 crore by 2030: Pankaj Batra, SARI/EI. ET Energyworld, March 24, 2020. <https://energy.economictimes.indiatimes.com/news/power/south-asian-grid-will-require-an-investment-of-rs-45000-crore-by-2030-manoj-batra-sari/ei/74795181>

Lazard. 2018. Levelized Cost of Energy and Levelized Cost of Storage 2018. <https://www.lazard.com/perspective/levelized-cost-of-energy-and-levelized-cost-of-storage-2018/#:~:text=The%20low%20end%20levelized%20cost,coal%2C%20at%20%2436%2FMWh>.

Lighting Global. Schatz Energy Research Center. 2020. Energy Requirements of the Screening Sites in a COVID-19 Hub and Spoke Testing Approach. <https://www.lightingglobal.org/wp-content/uploads/2020/07/Covid-19-Screening-Energy-Requirements.pdf>

McKinsey & Company. 2020. How a post-pandemic stimulus can both create jobs and help the climate. <https://www.mckinsey.com/business-functions/sustainability/our-insights/how-a-post-pandemic-stimulus-can-both-create-jobs-and-help-the-climate>

McKinsey & Company. 2020. Post-COVID Stimulus – Green or Grey? Discussion document.

Mitra, Partha Pratim. 2020. Harnessing renewable energy: Onus on South Asia. South Asia Monitor, October, 3 2020. <https://southasiamonitor.org/spotlight/harnessing-renewable-energy-onus-south-asia>

New Climate Institute. 2019. The role of renewable energy mini-grids in Kenya’s electricity sector. https://ambitiontoaction.net/wp-content/uploads/2019/11/A2A-Kenya_Mini-grids-study_201911.pdf

Potsdam Institute for Climate Impact Research. 2020. Coal Exit Benefits Outweigh its Costs. <https://www.pik-potsdam.de/news/press-releases/coal-exit-benefits-outweigh-its-costs>. 23 March 2020

Power for All, Schneider Electric Foundation, Rockefeller Foundation. 2019. Powering Jobs Census 2019: The Energy Access Workforce. <https://www.powerforall.org/resources/reports/powering-jobs-census-2019-energy-access-workforce>

Rahman, M.M., Khanam, R. & Rahman, M. 2018. Health care expenditure and health outcome nexus: new evidence from the SAARC-ASEAN region. Global Health 14, 113 <https://doi.org/10.1186/s12992-018-0430-1>

Reeves et al (2013). Globalization and Health 2013, Does investment in the health sector promote or inhibit economic growth? <https://globalizationandhealth.biomedcentral.com/articles/10.1186/1744-8603-9-43>. 9:43. pg. 11

Renewable Energy and Energy Efficiency Partnership (REEP). <https://edison.bgfz.org/>

Rewald, Rebecca. 2017. Energy and Women and Girls: Analyzing the Needs, Uses, and Impacts of Energy on Women and Girls in the Developing World. https://www.researchgate.net/publication/321224995_Energy_and_Women_and_Girls_Analyzing_the_needs_uses_and_impacts_of_energy_on_women_and_girls_in_the_developing_world

SEforALL (Sustainable Energy for All). 2020. Chilling Prospects: Tracking Sustainable Cooling for All

2020. <https://www.seforall.org/chilling-prospects-2020>

SEforALL. 2019. Energizing Finance 2019. <https://www.seforall.org/data-and-evidence/energizing-finance-series/energizing-finance-2019#:~:text=energizing%20Finance%3A%20Taking%20the%20Pulse,%2C%20the%20Philippines%2C%20and%20Uganda.>

SEforALL. 2020. Recover Better with Sustainable Energy for All. <https://www.seforall.org/system/files/2020-08/RB-Africa-SEforALL.pdf>

The Economic Times. 2020. India to have 450 GW renewable energy by 2020: President. <https://economictimes.indiatimes.com/small-biz/productline/power-generation/india-to-have-450-gw-renewable-energy-by-2030-president/articleshow/73804463.cms#:~:text=New%20Delhi%3A%20India%20has%20embarked,Nath%20Kovind%20said%20on%20Friday>

Tirtha Biswas, Sachin Sharma, and Karthik Ganesan. 2018. Factors Influencing the Uptake of Energy Efficiency Initiatives by Indian MSMEs. <https://www.ceew.in/publications/factors-influencing-uptake-energy-efficiency-initiatives-indian-msmes>

UNESCAP (United Nations Economic Commission for Asia and Pacific). 2020. COVID-19 and South Asia: National Strategies and Subregional Cooperation for Accelerating Inclusive, Sustainable and Resilient Recovery. <https://www.unescap.org/resources/covid-19-and-south-asia-national-strategies-and-subregional-cooperation-accelerating>

UNDP (United Nations Development Programme). 2018. De-risking Renewable Energy Investment: Off-Grid Electrification. <https://bit.ly/2BZ8JQe>

UNDP. 2019. Accelerating SDG 7 Achievement, Policy Brief 3, Financing SDG 7. https://sustainabledevelopment.un.org/content/documents/24090pb3_cover.pdf.

World Bank Group. 2017. Demand-side Energy Efficiency Opportunities in Bangladesh. <http://documents1.worldbank.org/curated/en/845631543398730054/pdf/132544-Bangladesh-Demand-Side-Energy-Efficiency-FINAL.pdf>

World Bank Group. 2019. Doing Business 2019: Sustaining the pace of reforms. <https://www.worldbank.org/en/news/feature/2019/10/24/doing-business-2020-sustaining-the-pace-of-reforms>

World Bank Group. 2020. Doing Business 2020: Fact Sheet: East Asia and Pacific. <https://www.doingbusiness.org/content/dam/doingBusiness/pdf/db2020/DB20-FS-EAP.pdf>

World Bank Group. Energy Efficiency Roadmap for Pakistan. <http://documents1.worldbank.org/curated/pt/280681555926394575/pdf/Energy-Efficiency-Roadmap-for-Pakistan.pdf>

World Green Building Council. 2017. Global Status Report, 2017. <https://www.worldgbc.org/news-media/global-status-report-2017>

COPYRIGHT AND DISCLAIMER

© 2020 SUSTAINABLE ENERGY FOR ALL

Vienna (Headquarters)

Andromeda Tower, 15th Floor
Donau City Strasse 6
1220, Vienna, Austria
Telephone: +43 676 846 727 200

Washington, DC

1750 Pennsylvania Ave. NW
Washington, DC 20006 USA
Telephone: +1 202 390 0078

New York

420 5th Ave
New York, NY 10018 USA

Website: www.SEforALL.org

RIGHTS AND PERMISSIONS

The material in this work is subject to copyright. Because SEforALL encourages dissemination of its knowledge, this work may be reproduced, in whole or in part, for noncommercial purposes if full attribution to this work is given to Sustainable Energy for All (SEforALL). SEforALL does not guarantee the accuracy of the data included in this work.



www.SEforALL.org