

RISE 2020

REGULATORY INDICATORS  
FOR SUSTAINABLE ENERGY



# SUSTAINING THE MOMENTUM



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The Energy Sector Management Assistance Program (ESMAP) is a partnership between the World Bank and 18 partners to help low- and middle-income countries reduce poverty and boost growth through sustainable energy solutions. ESMAP's analytical and advisory services are fully integrated within the World Bank's country financing and policy dialogue in the energy sector. Through the World Bank Group (WBG), ESMAP works to accelerate the energy transition required to achieve Sustainable Development Goal 7 (SDG7) to ensure access to affordable, reliable, sustainable, and modern energy for all. It helps to shape WBG strategies and programs to achieve the WBG Climate Change Action Plan targets. Learn more at: <https://esmap.org>

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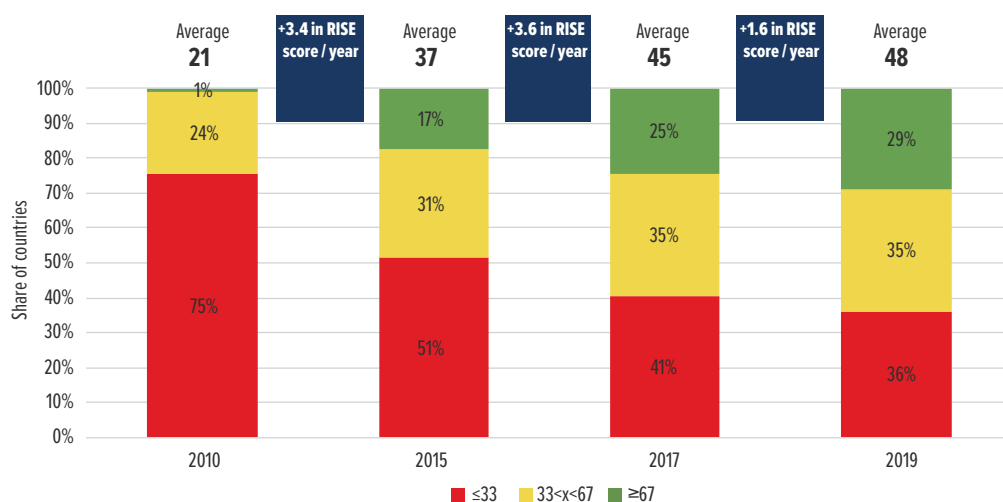
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## ENERGY EFFICIENCY: A STRONG UPWARD TREND ACROSS ALL REGIONS

The energy efficiency pillar, despite overall progress, shows the slowest rise of the four pillars over 2017–19. This could be explained by the possibility that most of the easier actions were taken between 2010 and 2017 where more complex policies require more time to implement as well as additional investment and infrastructure. The average growth rate for the energy efficiency pillar was 1.6 points per year between 2017 and 2019, less than half the growth rate between 2015 and 2017 (figure 34). The percentage of countries achieving a RISE score in the green zone increased almost thirty-fold over the period, from 1 percent in 2010 to 29 percent in 2019, as the percentage of countries with few or no meaningful energy efficiency policies in place declined by more than half, from 75 percent to 36 percent. The global average, however, remains relatively low.

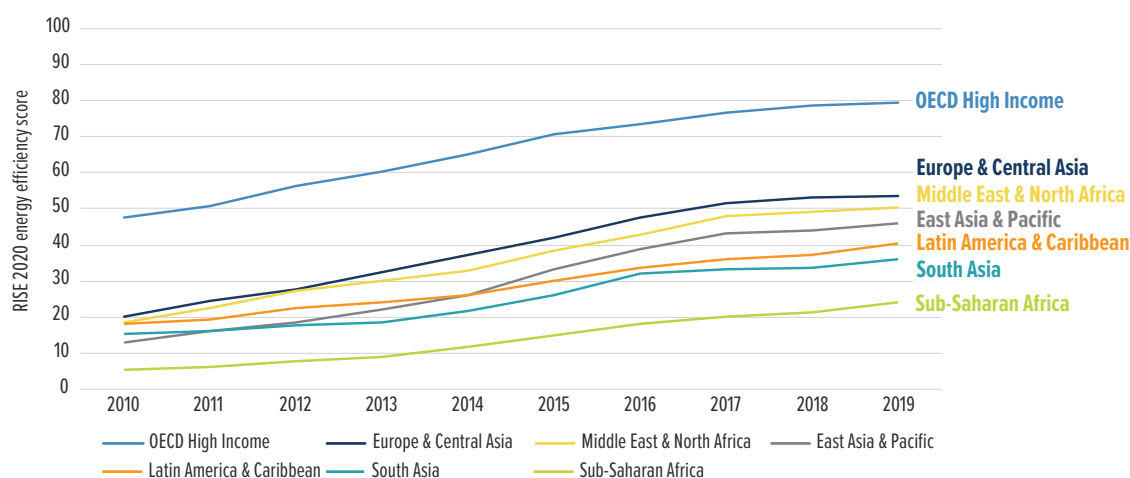
**FIGURE 34. ENERGY EFFICIENCY: PROGRESS IN RISE SCORES FOR PILLAR, 2010–19**



Source: World Bank, RISE 2020

**All regions and income groups increased their adoption of policy and regulatory frameworks for energy efficiency between 2010 and 2019 (figure 35).** The observed trend reveals a global emphasis on meeting higher standards for energy efficiency. Across the 138 countries covered in RISE 2020, the higher standards align closely with RISE best practices for legislation, policies, and strategies on energy efficiency. By the end of 2019, nearly 70 percent of the RISE 2020 countries had adopted legislation planning for energy efficiency. However, with respect to policies targeting sectors that have a major impact on energy consumption (e.g., buildings and transport), a great deal of room remains for improvement. OECD (high-income) countries are leaders in policy and regulatory frameworks for energy efficiency, chalking up an average score of 79 in 2019. South Asia and Sub-Saharan Africa have the lowest scores.

**FIGURE 35. ENERGY EFFICIENCY: EVOLUTION OF RISE SCORES BY REGION, 2010–19**



Source: World Bank, RISE 2020.

The fastest improving regions in the adoption of energy efficiency policies between 2017 and 2019 were Latin America and the Caribbean and Sub-Saharan Africa (table 3). Their average scores rose 2.3 and 2 points per year, respectively. Panama improved the fastest among Latin America and Caribbean countries, implementing, among other measures, mandates for small and medium-sized enterprises and binding energy-saving obligations for public buildings covering water supply, wastewater services, municipal solid waste, street lighting, transportation, and heat supply. Among Sub-Saharan African countries, Chad advanced the most by imposing penalties on utilities for noncompliance with efficiency requirements in generation, transmission and distribution networks, and demand-side management.

**TABLE 3. ENERGY EFFICIENCY: FASTEST IMPROVERS, BY REGION**

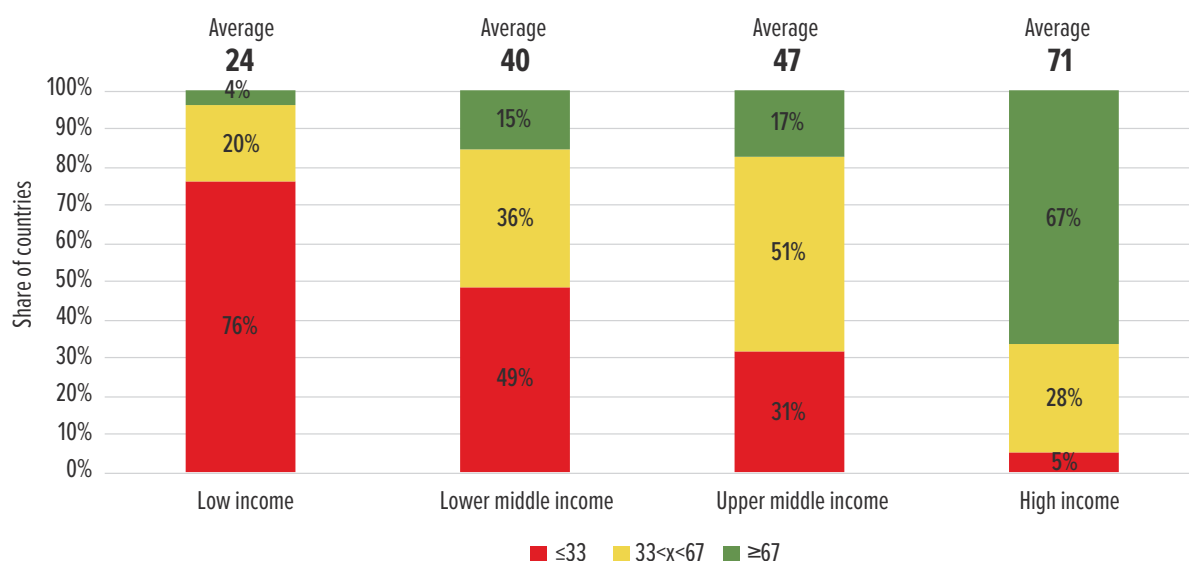
(RISE score on pillar in 2020, annual rate of improvement in RISE score 2017–19)

East Asia & Pacific	Europe & Central Asia	Latin America & Caribbean	Middle East & North Africa	OECD High Income	South Asia	Sub-Saharan Africa
Singapore (83, 6.4)	Montenegro (61, 6.0)	Panama (66, 8.7)	Kuwait (41, 4.1)	Korea, Rep. (94, 9.5)	Nepal (27, 6.4)	Chad (42, 16.6)
Vietnam (73, 5.6)	Kosovo (55, 4.6)	Ecuador (58, 8.5)	Oman (18, 3.3)	United Kingdom (92, 5.5)	India (91, 4.6)	Kenya (67, 9.8)
Thailand (68, 1.8)	Bosnia and Herzegovina (55, 3.7)	Costa Rica (63, 6.8)	Iran (65, 1.7)	Norway (82, 4.5)	Sri Lanka (46, 3.0)	Togo (28, 5.8)

Source: World Bank, RISE 2020.

**In general, income level appears to correlate with energy efficiency scores.** Lower-income countries are clustered mostly in the red zone (figure 36), suggesting that their policy frameworks are not prepared for energy efficiency. Higher-income countries with more advanced policy frameworks cluster mainly in the green zone.

**FIGURE 36. ENERGY EFFICIENCY: RISE SCORES BY INCOME GROUP, 2019**



Source: World Bank, RISE 2020.

**There were major exceptions in this general trend.** Persian Gulf countries have high income levels, but they perform poorly in their uptake of efficiency measures. Bahrain and Oman fall in the red zone, while the RISE scores of Saudi Arabia and Qatar place them in the yellow zone. Low-income Rwanda, on the other hand, has scored in the yellow zone since it puts a lot of emphasis on implementing energy efficiency incentive programs across the transport, power and residential & commercial sectors.

**FIGURE 37. ENERGY EFFICIENCY: RISE SCORES AGAINST GDP PER CAPITA, 2019**

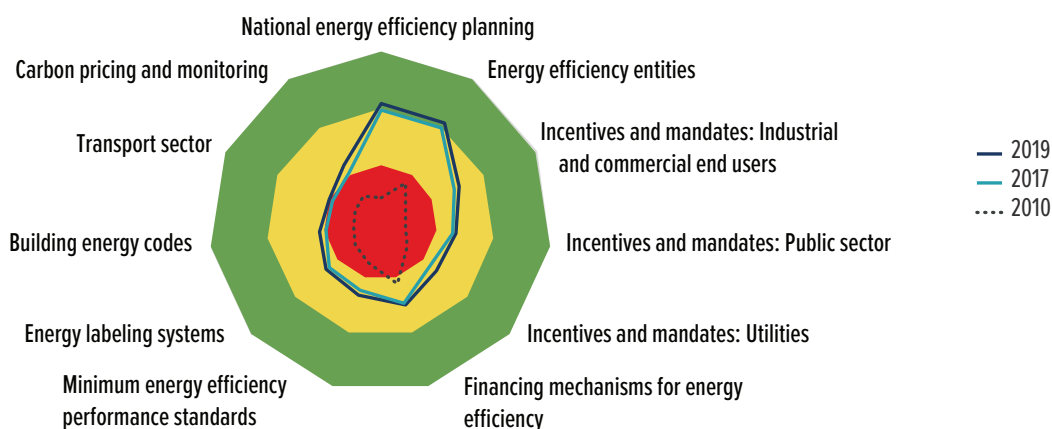


Source: World Bank, RISE 2020.



**RISE 2020 examines progress on energy efficiency using 11 carefully tailored indicators.** Those showing the greatest improvement since 2010 are national energy efficiency planning, followed by energy efficiency entities and incentives, and mandates for industrial and commercial end users (figure 38). Meanwhile, the indicator on financing mechanisms for energy efficiency showed the least improvement, as countries appear to have been slow to adopt discounted green mortgages, green or energy efficiency bonds, and partial risk guarantees. The residential sector lacks mechanisms available to the commercial and industrial sectors.

**FIGURE 38. ENERGY EFFICIENCY: PROGRESS BY RISE INDICATOR, 2010, 2017, AND 2019**



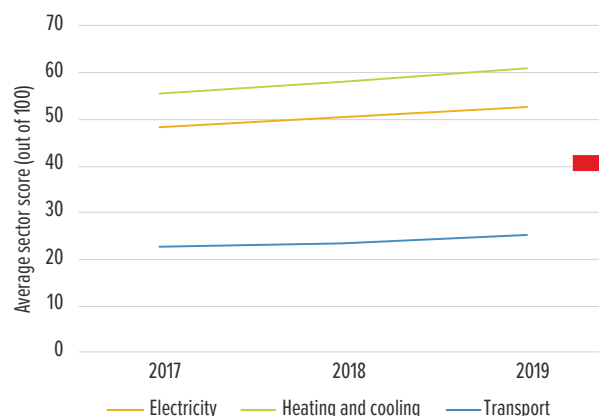
Source: World Bank, RISE 2020.

**Although overall growth has slowed in the adoption of policy frameworks, some policy areas have gained more traction than others.** Since 2017, the three fastest improving sub-indicators are (i) national energy efficiency legislation and action planning; (ii) minimum energy efficiency performance standards; and (iii) new residential and commercial building codes. Implementation of national legislation and action planning rose from 79 percent of countries in 2017 to 88 percent in 2019. Minimum energy efficiency performance standards increased from 68 percent in 2017 to 73 percent in 2019. New residential and commercial building codes rose from 56 percent in 2017 to 61 percent in 2019.

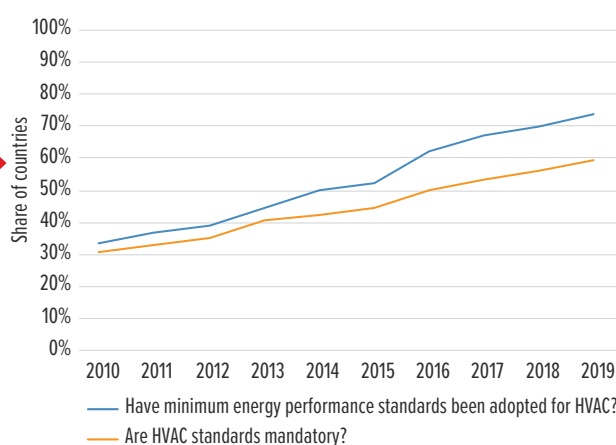
**In terms of energy efficiency consumption in the electricity, transport, and heating and cooling sectors, RISE countries scored highest on efficiency policies in the HVAC sector, with scores increasing by approximately 3 points per year between 2017 and 2019 to reach an average of 61 in 2019 (figure 39).** This is because approximately 75 percent of the surveyed countries across all regions<sup>9</sup> adopted minimum HVAC energy performance standards and labeling measures, with roughly 60 percent making those measures mandatory (figure 40). These findings are in line with the growing recognition of heating and cooling as vital priorities. The transport sector scored the lowest (see figure 39), reflecting a lack of mandates and incentive programs to support reductions in transport demand and widespread failure to shift to more energy-efficient modes for commercial and industrial use (such as freight rail and heavy-duty vehicles covered by mandatory fuel-economy standards).

9 103 countries (out of the 138 countries surveyed) have adopted these measures.

**FIGURE 39. ENERGY EFFICIENCY: RISE SCORES BY SECTOR, 2017–19**



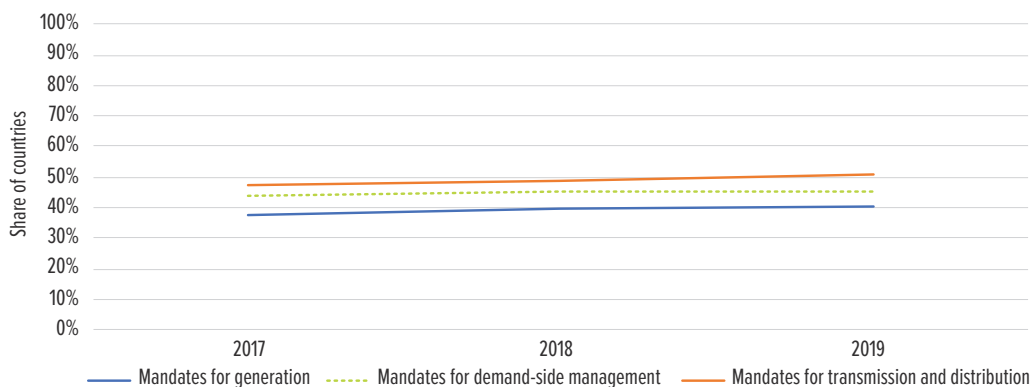
**FIGURE 40. EVOLUTION OF HVAC ADOPTION GLOBALLY, 2010–19**



Note: HVAC = heating, ventilation, and air conditioning.  
Source: World Bank, RISE 2020.

**Incentives and mandates shape the generation, transmission, distribution, and demand-side management of utilities.** These flatlined between 2017 and 2019, showing almost no change (figure 41). Despite increasing energy demand worldwide, only 40 percent of RISE countries have adequate mandates in place for generation. As seen below, countries seem to place higher emphasis on mandates for transmission and distribution and demand-side management, with roughly half stating that their respective utilities must implement measures in these two areas, under penalty for noncompliance.

**FIGURE 41. COUNTRIES WITH ENERGY EFFICIENCY REGULATIONS FOR UTILITIES, 2017–19**



Source: World Bank, RISE 2020.