

# The economic benefits of a clean recovery

## The case of energy-efficient cooling

A short report by The Economist Intelligence Unit



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# THE ECONOMIC BENEFITS OF A CLEAN RECOVERY

## THE CASE OF ENERGY-EFFICIENT COOLING

**Economic crises present an opportunity for governments to take action on climate change.** The lockdown responses to the COVID-19 pandemic have led to a fall in emissions—global CO<sub>2</sub> emissions are expected to be about 8% lower in 2020 than in 2019,<sup>1</sup> in line with the required 7.6% reduction needed each year through 2030 to keep temperature increases below 1.5°C, compared with pre-industrial levels.<sup>2</sup> While the impact of lockdowns on climate has been positive, the impact on the economy has not—The Economist Intelligence Unit (EIU) forecasts global output to contract by 5% this year.<sup>3</sup> However, in the fight to regain economic growth, progress on lowering emissions must not be lost: as policymakers develop economic recovery packages, they must target policies that prioritise both climate change and economic growth.

**Energy efficiency policies—even on just a national scale—have significant scope to reduce emissions.** A 2014 study by *The Economist* assessed policy options on their ability to reduce emissions.

### Emission reductions by policies/actions, bn tonnes CO<sub>2</sub> equivalent

Categories: ■ Global treaties ■ Energy production ■ Transport ■ Land and forests ■ Other regulations ■ Other  
■ Energy efficiency is a core focus

Category	Policy/Action	Cumulative emissions	Period	Annual emissions*
Global treaties	Montreal protocol	135.0bn	1989-2013	5.6bn
Energy production	Hydropower worldwide	2.8bn	2010	2.8bn
Energy production	Nuclear power worldwide	2.2bn	2010	2.2bn
Other	China one-child policy	1.3bn	2005	1.3bn
Energy production	Other renewables worldwide	600m	2010	600m
Transport	US vehicle emissions & fuel economy standards <sup>†</sup>	6.0bn	2012-25	460m
Land and forests	Brazil forest preservation	3.2bn	2005-13	400m
Land and forests	India land-use change	177m	2007	177m
Global treaties	Clean Development Mechanism	1.5bn	2004-14	150m
Other regulations	US building & applications codes	3.0bn	2008-30	136m
Other regulations	China SOE efficiency targets	1.9bn	2005-20	126m
Other	Collapse of USSR	709m	1992-98	118m
Global treaties	Global Environment Facility	2.3bn	1991-2014	100m
Other regulations	EU energy efficiency	230m	2008-12	58m
Transport	US vehicle emissions & fuel economy standards <sup>‡</sup>	270m	20014-18	54m
Energy production	EU renewables	117m	2008-12	29m
Other regulations	US building codes (2013)	230m	2014-30	10m
Other regulations	US appliances (2013)	158m	2014-30	10m
Global treaties	Clean technology fund	1.7bn	project lifetime	na
Global treaties	EU vehicle emissions standards	140m	2020	na

\* Annual emissions are cumulative emissions divided by the relevant period. The estimate for the current emissions avoided under the Montreal protocol is eight billion tonnes of CO<sub>2</sub>e. The annual figure for the collapse of the USSR refers to the years 1992-98.

<sup>†</sup> Cars and light trucks. <sup>‡</sup> Heavy trucks.

Source: *The Economist* 2014.

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While global treaties, global shifts in energy production and China's one-child policy achieve the greatest reductions, energy efficiency policies featured most frequently (see rows highlighted in blue in the chart below). The inclusion of energy efficiency policies within stimulus packages would have a tangible impact on reducing emissions.

**And that impact would be accompanied by economic growth.** Policies such as improving industrial energy efficiency, retrofitting buildings and rolling out more efficient household appliances can create jobs, stimulate additional spending in the economy and be implemented quickly and easily.



**Job creation:** Spending on energy efficiency creates 77 jobs per US\$10m, compared to just 27 jobs for the same amount of spending on fossil fuels.<sup>4</sup> The effect may be even higher for improving building efficiency, with 90–300 jobs for every \$10m spent.<sup>5</sup>



**Multiplier effect:** Improving industrial energy efficiency, retrofitting houses for energy efficiency and installing smart-building systems, all have a gross-value-added multiplier of around 2.<sup>6,7</sup> More efficient systems also allow the government and consumers to save on energy bills, which can further boost spending in the economy.



**Time to impact the economy:** Energy efficiency programmes can be rolled out quickly. As outlined by the IEA, existing efficiency programmes “can be rapidly expanded and new projects can be shovel-ready within weeks or months”.<sup>8</sup> In comparison, large infrastructure projects can take years of planning.



**Ability to implement:** The skills requirements are generally low and jobs can be created for workers displaced by the COVID-19 pandemic, reducing the need for retraining. For example, wall insulation requires less training than solar installation.

**Policies on efficient, climate-friendly cooling will perform similarly.** Efficient, climate-friendly cooling could help to avoid up to 460 bn tonnes of greenhouse gas emissions over the next four decades (roughly equivalent to eight years of global emissions).<sup>9</sup> From installing efficient or smart system cooling appliances, to retrofitting buildings to better use non-mechanical cooling methods, and rolling out green shading, climate-friendly cooling policies have the potential to radically reduce emissions while generating jobs, stimulating investment and improving health, education and food security.



**The India Cooling Action Plan**, which seeks to reduce cooling demand across sectors by 20 to 25% by 2037–38, will train and certify 100,000 servicing sector technicians by 2022–23.<sup>10</sup>



**The US 2009 Weatherization Assistance Program** employed over 15,000 additional workers.<sup>11</sup> The programme included a “wide variety of measures encompassing the building envelope, its heating and cooling systems, electrical system and appliances”.<sup>12</sup>

**Despite the potential employment and growth opportunities, COVID-19 stimulus packages to date have largely excluded energy efficiency and cooling.** The EIU analysed over 400 stimulus packages and found that just 3% have included opportunities for energy efficiency (including vehicle

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efficiency).<sup>13</sup> No stimulus packages directly include measures targeting efficient, climate-friendly cooling.

**Some countries are making real efforts to promote energy efficiency, for example:**



**Denmark** launched a DKK30.2bn (1.3% of the country's GDP) programme focused on green renovation of public housing.<sup>14</sup>



On 7 July, the **UK** launched a £2bn grant scheme that allows homeowners to apply for vouchers of up to £5,000 to make energy-saving home improvements. The scheme will launch in September.<sup>15</sup>



On 20 May, **Luxembourg** announced fiscal support from the Ministry of the Economy for companies to invest in energy efficiency projects, with a maximum of €800,000 per project.<sup>16</sup>



On 14 July 2020, **South Korea** set out an overview of its Green New Deal which includes remodelling of public buildings to make them more energy-efficient.<sup>17</sup>

**When designing further stimulus packages, policymakers must ask themselves the following questions:**



Will the policy reduce emissions?



How many jobs will be created per dollar spent?



Will the investment spur additional increases in spending that stimulate the economy?



Are programmes “shovel-ready”? Can they have an immediate effect on job creation and economic growth?



Are the skills in place to deliver these programmes? Is training needed?

**Longer-term recovery packages are on the way.** They can, and should, include energy efficiency, including for cooling. While short-term rescue packages might not be the place to focus on long-term climate benefits, longer-term recovery packages certainly are. The COVID-19 pandemic creates a unique opportunity to steer the economy away from carbon. Governments must prioritise climate-friendly investments that stimulate economic growth. Energy efficiency and – by extension – sustainable cooling should be priorities.

## **About the Economist Intelligence Unit**

The Economist Intelligence Unit (EIU) is the research arm of The Economist Group, publisher of The Economist. As the world's leading provider of country intelligence, it helps governments, institutions and businesses by providing timely, reliable and impartial analysis of economic and development strategies. Through its public policy practice, The EIU provides evidence-based research for policymakers and stakeholders seeking measureable outcomes, in fields ranging from gender and finance to energy and technology. It conducts research through interviews, regulatory analysis, quantitative modelling and forecasting, and displays the results via interactive data visualisation tools. Through a global network of more than 650 analysts and contributors, The EIU continuously assesses and forecasts political, economic and business conditions in more than 200 countries. For more information, visit [www.eiu.com](http://www.eiu.com)

## **About the Kigali Cooling Efficiency Program (K-CEP)**

The Kigali Cooling Efficiency Program (K-CEP) is a philanthropic collaboration launched in 2017 to support the Kigali Amendment to the Montreal Protocol and the transition to efficient, climatefriendly cooling solutions for all. K-CEP works in over 50 countries in support of ambitious action by governments, businesses and civil society. K-CEP's program office, the Efficiency Cooling Office, is housed at the ClimateWorks Foundation in San Francisco.

For any enquiries about the report please contact:

**Diana Hindle Fisher**

The Economist Intelligence Unit London | United Kingdom

E: [dianahindlefisher@eiu.com](mailto:dianahindlefisher@eiu.com)

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<sup>1</sup> <https://www.iea.org/reports/global-energy-review-2020>

<sup>2</sup> <https://www.unenvironment.org/news-and-stories/press-release/cut-global-emissions-76-percent-every-year-next-decade-meet-15degc>

<sup>3</sup> EIU Global Outlook August 2020

<sup>4</sup> <https://www.sciencedirect.com/science/article/abs/pii/S026499931630709X>

<sup>5</sup> <https://webstore.iea.org/download/direct/3008>

<sup>6</sup> <https://www.mckinsey.com/business-functions/sustainability/our-insights/how-a-post-pandemic-stimulus-can-both-create-jobs-and-help-the-climate?cid=other-eml-alt-mip-mck&hlkid=48b719c9b1b645ba87b495e16e96485e&hctky=11949426&hdpid=295dec5d-2885-4d4e-abfa-ec4da171db8a#>

<sup>7</sup> For context, a multiplier of 1.5–2 is considered high [<https://www.smithschool.ox.ac.uk/publications/wpapers/workingpaper20-02.pdf>]. It means that for every \$1 spent by the government, \$1.5–\$2 is spent in the economy.

<sup>8</sup> <https://webstore.iea.org/download/direct/3008>

<sup>9</sup> <https://www.unenvironment.org/news-and-stories/press-release/climate-friendly-cooling-could-cut-years-greenhouse-gas-emissions>

<sup>10</sup> <https://www.manifestias.com/2020/04/04/india-cooling-action-plan/>

<sup>11</sup> <https://www.energy.gov/eere/articles/improving-energy-efficiency-and-creating-jobs-through-weatherization>

<sup>12</sup> <https://fas.org/programs/energy/btech/policy/Weatherization%20Article.pdf>

<sup>13</sup> The analysis identified stimulus packages launched by national governments globally in response to COVID-19 up until 19th July 2020.

<sup>14</sup> <https://www.ourhomedeal.eu/post/green-recovery-for-denmark>

<sup>15</sup> <https://www.bbc.co.uk/news/business-53313640>

<sup>16</sup> <https://chronicle.lu/category/economics/32824-eur7-800m-package-of-23-support-measures-announced-to-prepare-for-economic-recovery>

<sup>17</sup> <https://english.moef.go.kr/pc/selectTbPressCenterDtl.do?boardCd=N0001&seq=4940>

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LONDON  
20 Cabot Square  
London  
E14 4QW  
United Kingdom  
Tel: +44 (0) 20 7576 8181  
Email: london@eiu.com

NEW YORK  
750 Third Avenue  
5th Floor  
New York, NY 10017  
United States  
Tel: + 1 212 698 9717  
Email: americas@eiu.com

HONG KONG  
1301 Cityplaza Four  
12 Taikoo Wan Road  
Taikoo Shing  
Hong Kong  
Tel: + 852 2802 7288  
Email: asia@eiu.com