



# Product Energy Efficiency

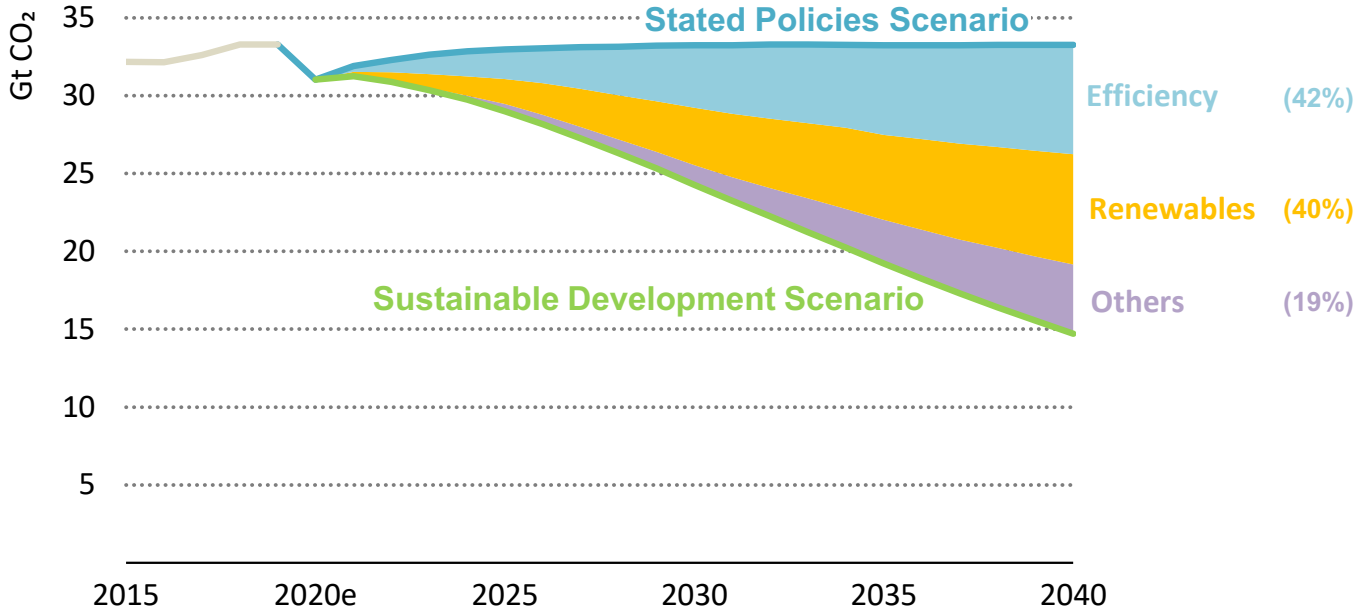
Mel Slade

10 December 2020

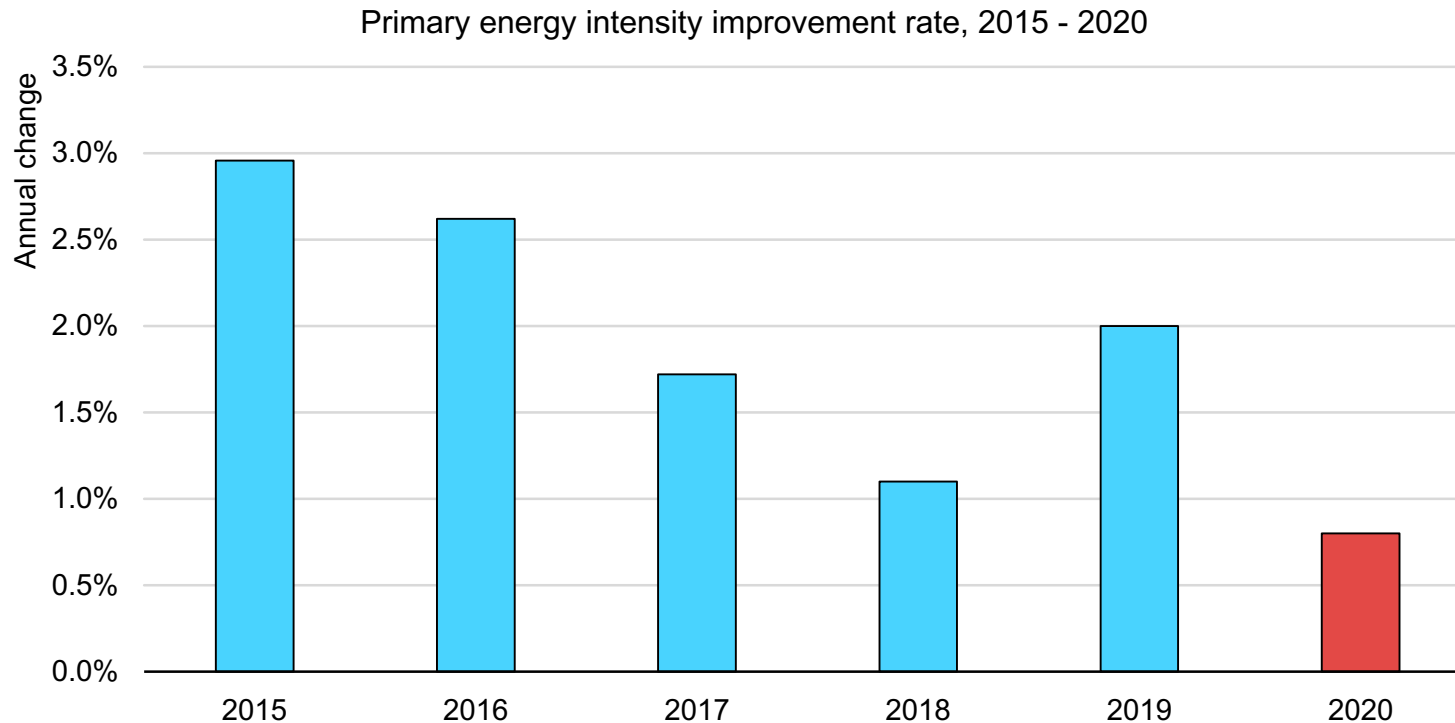
# Energy efficiency is crucial for achieving global climate goals



CO<sub>2</sub> emissions reductions in the Sustainable Development Scenario relative to the Stated Policies Scenario



**Energy efficiency is expected to contribute over 40% of energy sector GHG abatement up to 2040. A slowdown in energy efficiency today lessens the chance of meeting long-term climate goals.**



**The Covid-19 crisis has shocked both economic activity and energy demand.  
Primary energy intensity progress will halve this year.**

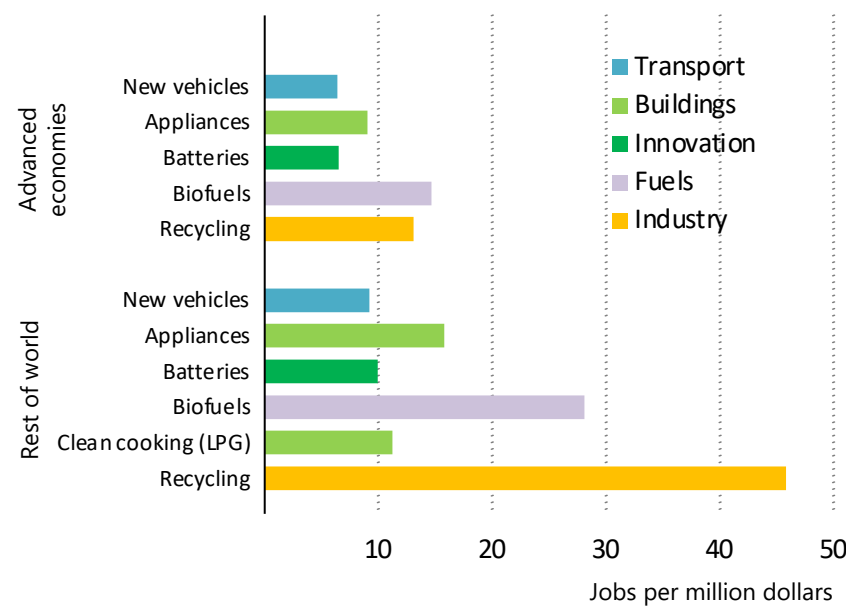
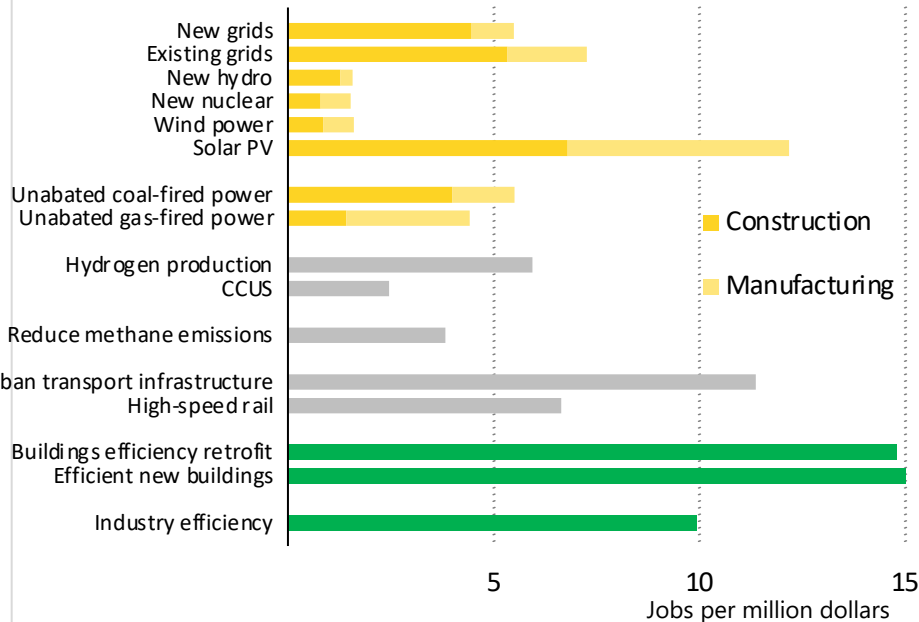
- The recent slowdown in energy efficiency progress has been exacerbated by the 2020 crisis
- Investment is down and structural trends are putting pressure on energy efficiency
- Scaling up efficiency action has the potential to create millions more jobs as well as ensure lower energy bills and lower emissions in the future
- Yet government actions on energy efficiency are uneven: opportunities to boost efficiency are not being seized
- Firm policy action can ensure that returns to growth lock in energy efficiency, not higher costs and emissions - the next three years are crucial

# Energy efficiency - job creation at the heart of sustainable recovery

Jobs created per million dollars of capital investment and spending by measure

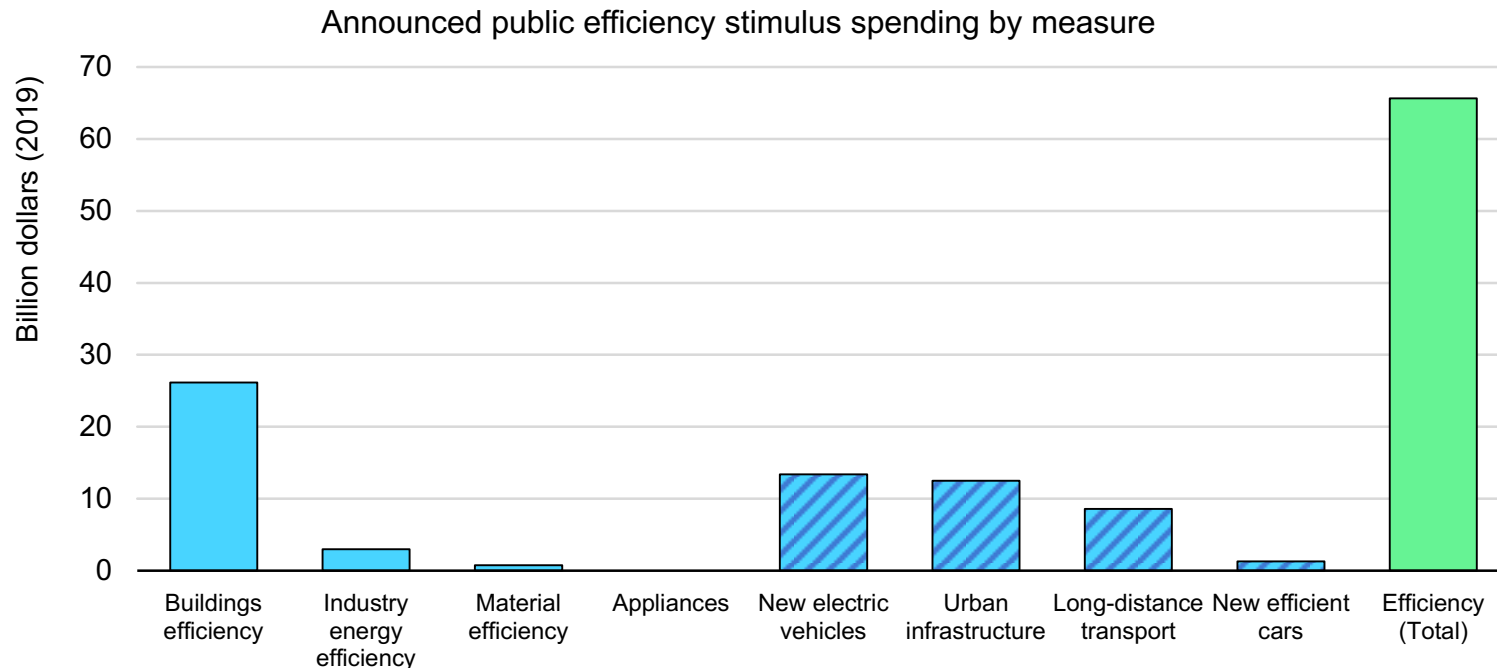
Per million dollars of capital investment

Per million dollars of spending



**The IEA Sustainable Recovery Plan envisions average annual investments of USD 1 trillion for the next three years. Energy efficiency related investments are the largest category of spending and creates most jobs per unit of investment**

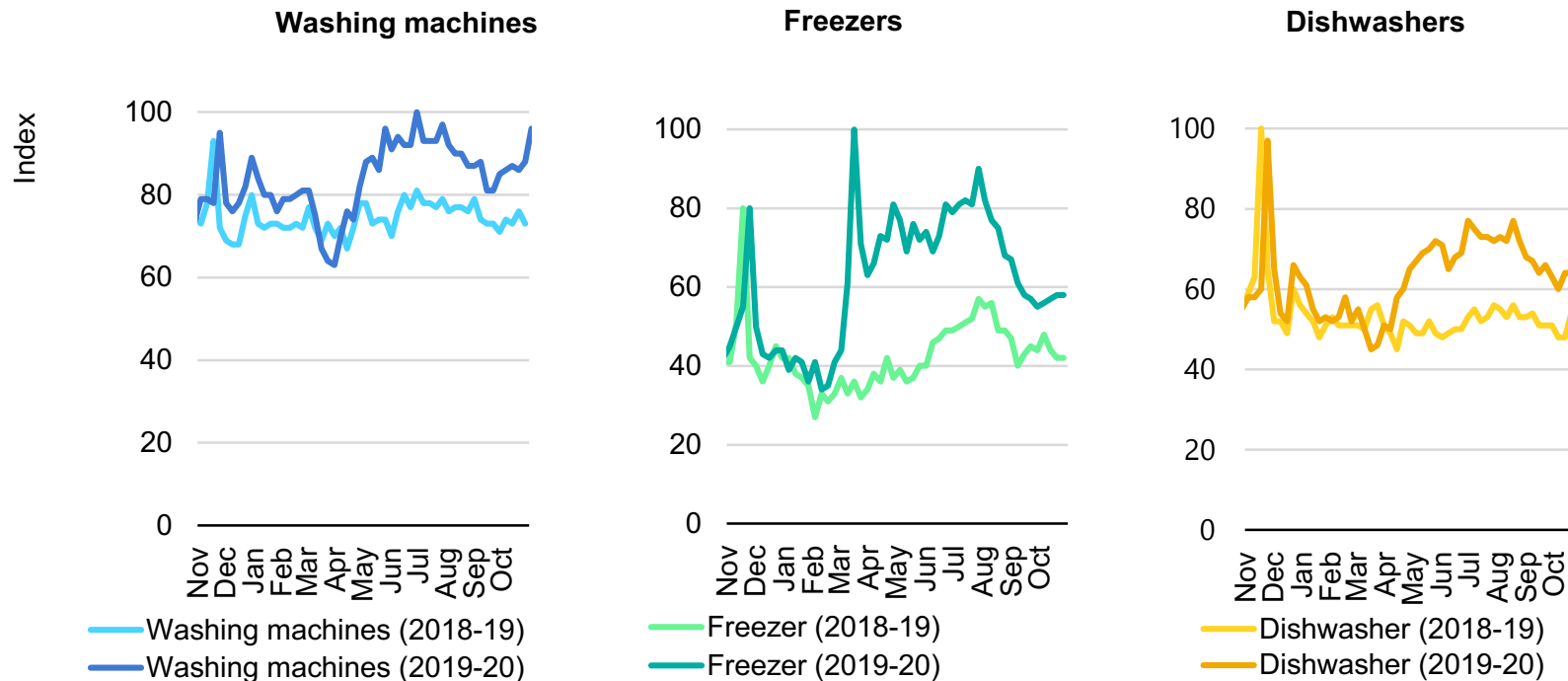
# Governments are supporting efficiency, but spending is uneven



**Governments have announced nearly USD 70 billion in energy efficiency related stimulus to date, with Europe accounting for 85% of the total. Buildings are the main target.**

# Short-term purchasing behaviours may have increased efficiency

Worldwide weekly online shopping search indices for selected whitegoods, 2018-19 and 2019-20



**With more time at home, appliance purchases may have increased in 2020, helping to maintain or even increase the efficiency of the stock.**

As COP Presidents, the UK wants to drive international action on product energy efficiency policy. Ahead of COP26, the UK and IEA have launched a **call to action** to strengthen the **Super-efficient Equipment and Appliance Deployment (SEAD initiative)** to support countries in achieving raised ambition **more quickly, easily and at a lower cost**. The objectives of the call to action are to:



**Set countries on a trajectory to double the efficiency of key products sold globally by 2030** – motors, air conditioners, refrigerators, lighting



Support the delivery of crucial **national climate change targets**



Provide consumers and businesses with more efficient products that are **affordable and cost-effective** to own and operate



Stimulate **innovation** and provide businesses with **export opportunities**



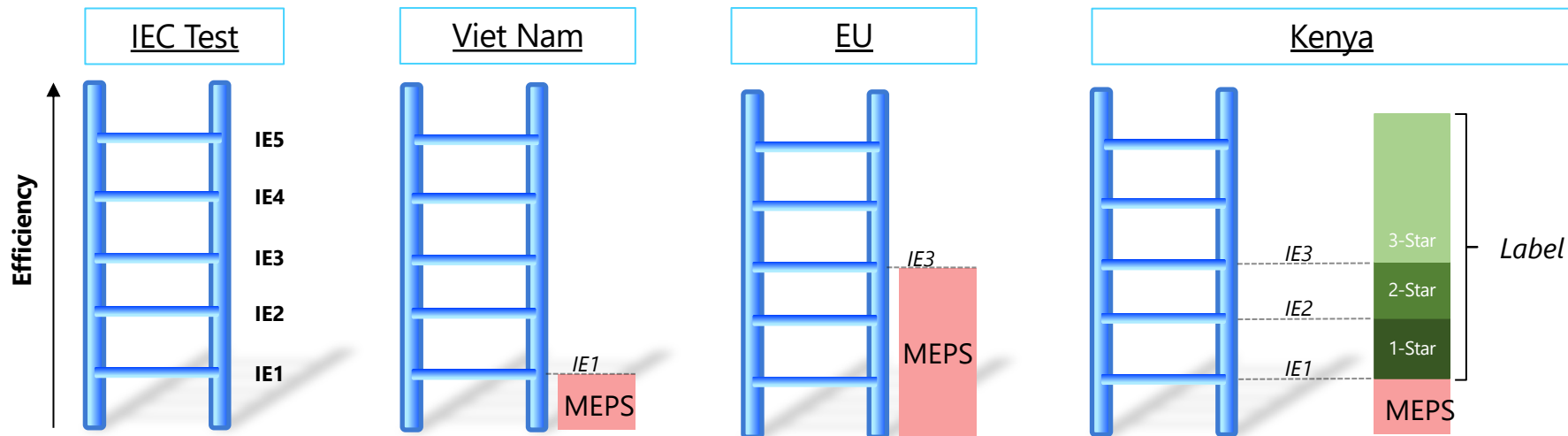
Promote a dual course of action making products both **energy efficient and climate friendly** by reducing the use of refrigerants in cooling appliances





# Performance ladder as a basis to set energy efficiency levels

Example: Electric Motors



All countries can use the same ladder for their policy thresholds.

Viet Nam (IE1) and the EU (IE3) use different levels for Minimum Energy Performance Standards (MEPS).

Whilst, Kenya currently uses (IE) tiers for its 3-star energy labelling of new electric motors.

**Objective is to lay out a ten year plan for the moving up the ladder using MEPS and voluntary measures**

## 1. Regulations, which lay out legal requirements

- Minimum energy performance standards that eliminate the least efficient products in the market
- Clear roles and responsibilities for all public and private sector stakeholders
- An adequately resources compliance programme

**Regulation**

## 2. Information that help users make choices

- Labels – including QR codes on products.
- Information campaigns – advertising in store, in the media and most importantly online
- Education and training of people selling products and installing them.

**Information**

## 3. Incentives applied to highly efficient products to transform markets

- Public procurement to generate demand to help build a domestic market for energy efficiency products
- Rebates to consumers
- Innovation awards for manufacturers
- On-bill financing to cover the purchase costs of the efficient appliances

**Incentives**

## The most effective policy approach is a combination of all three of these mechanisms

- Regulations or standards remove the least efficient products from the market
- Information campaigns encourage consumers to purchase more efficient products by providing information about full life-cycle costs
- Incentives to encourage the development of highly efficient products
- **Training for public and private sector stakeholders in all parts of the supply chain**

# Helping consumers purchase efficient products?



# Helping consumers purchase efficient products



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旧品回收

携手名录企业·环保拆解旧品·循环利用资源·共建绿色生活

“国家旧家电回收企业”

Energy grade

User center, consumer can login by their cell phone number, can share the current model to social networks, or save to their favorites.

An entrance of public service survey

Current model's popularity. (scanned amount, collected amount)

Product model Manufacturer

A button, click to show a energy indicators page. (next slide)

Utility fee calculation

Customer service phone number from manufacturer

An entrance of old appliances recycling. User submit related information of old appliance, waiting for the recycling company, door-to-door service.

QR system helps consumer to understand what the label means and is also a platform for manufacturers and compliance

# Energy Efficiency Policy Training 2019

145  
Participants

39%  
Women

34  
Countries



3  
Ambassadors  
More than a dozen guest speakers



**iea**