

THE GLOBAL COMMISSION ON THE ECONOMY AND CLIMATE

The Sustainable Infrastructure Imperative: Better Financing, Better Growth

Main Findings and Recommendations
of the Global Commission's 2016 Report

THE **NEW** CLIMATE **ECONOMY**

The Global Commission on the Economy and Climate

The New Climate Economy project

Led by a Global Commission

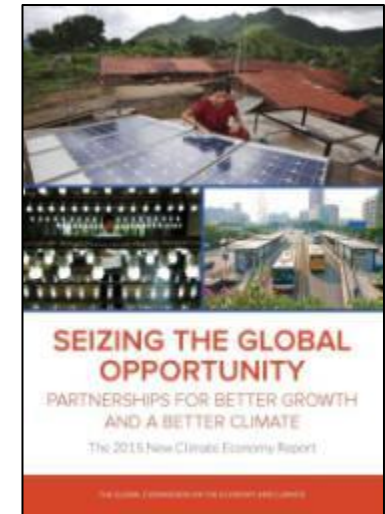
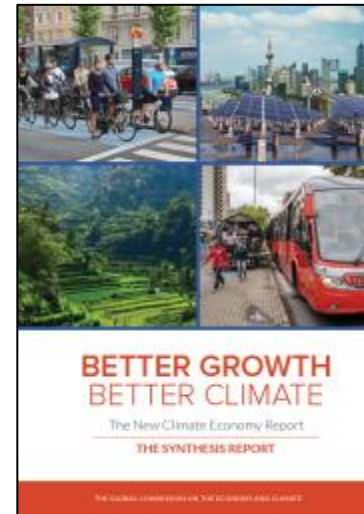
Made up of former heads of government, finance ministers, CEOs of major companies, Mayors, heads of international economic institutions, etc.

Commissioned in 2013 by 7 countries

Colombia, Ethiopia, Indonesia, Norway, Sweden, South Korea, United Kingdom

Building the evidence base

3 major annual reports and 42 working papers and country case studies so far.



The false dilemma



**Promoting
economic growth**

VS



**Fighting climate
change**

Main findings of 2016 Report

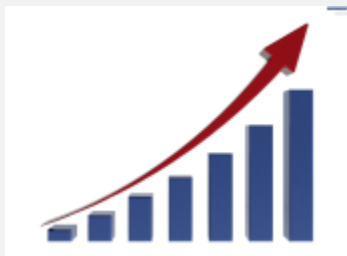
- **Investing in sustainable infrastructure** is key to tackling three global challenges: reigniting growth, delivering on the Sustainable Development Goals, and implementing the Paris Agreement.
- The infrastructure investment needed over the next 15 years – about US\$90 trillion - is **more than the entire current stock**.
- The **global South will account for roughly 2/3** of global infrastructure investment, and have an opportunity to “leapfrog” polluting and inefficient models.
- **Next 2-3 years are critical:** because of lock-in of capital and technology and a shrinking carbon budget.
- We have an historic opportunity to deliver **inclusive economic growth, eliminate poverty and reduce climate risk**.
- **More money alone won't do the job.** A range of barriers must be tackled to raise the quantity and the quality of infrastructure investment.



INFRASTRUCTURE:

Milestone agreements in 2015 = a new global agenda.

Three key challenges now:



Boost global demand and activity in the short-term and lay foundations for sustained long-term **growth**.



Implement the **Sustainable Development Goals** through inclusive growth and access to basic services.



Cut **emissions** to achieve net zero by 2050, and increase **resilience & adaptation**.

Sustainable infrastructure is at the heart of solutions to all three.

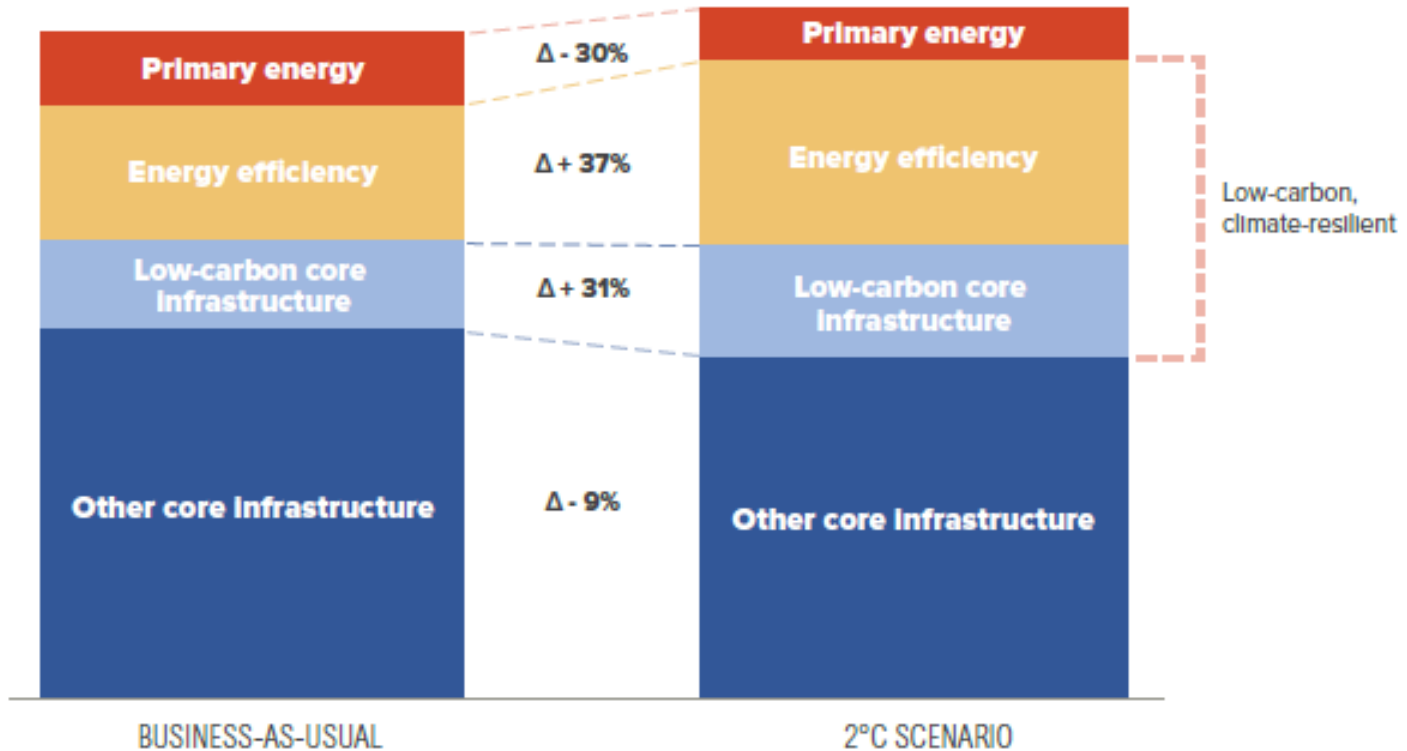
2016 Global Commission Report: Sustainable infrastructure at the heart of action to deliver a new climate economy

- In next 15 years we will **develop more infrastructure than entire current stock** – we need to ensure it is sustainable.
- Sustainable infrastructure includes:
 - Clean and efficient energy systems, public transport, efficient buildings, water supply and sanitation
 - And also natural infrastructure (such as forest landscapes, wetlands and watershed protection)



INFRASTRUCTURE: Investing in sustainable infrastructure requires a shift in investment but does not need to cost much more

Infrastructure spending needed for a 2°C scenario (2015-2030, percentage change)



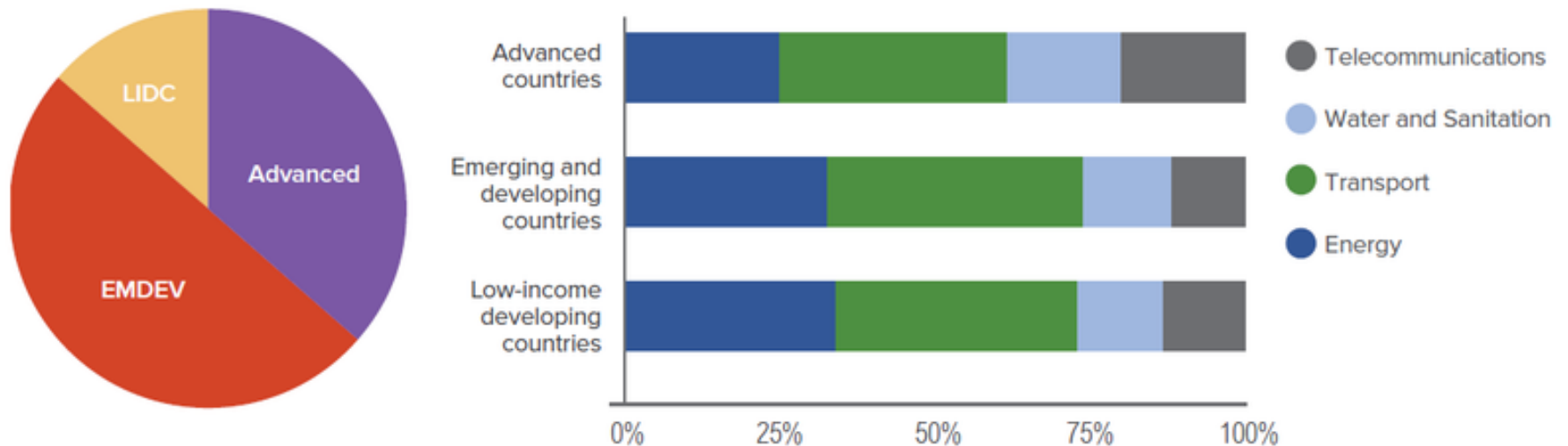
Note: Δ is the mathematical symbol for change.

Source: Global Commission on the Economy and Climate, 2016 and 2014, and Bhattacharya et al., 2016

- Primary energy: extraction of oil, gas and coal
- Energy efficiency: buildings, energy and transportation
- Low-carbon core infrastructure: renewable energy, nuclear, CCS, low-carbon transport (e.g. light rail and Bus Rapid Transit systems), climate-proofed water and sanitation including some adaptation infrastructure (e.g. sea walls and flood protection)
- Other core infrastructure: standard water/sanitation, high-carbon transport (e.g. roads), energy production, and telecommunications

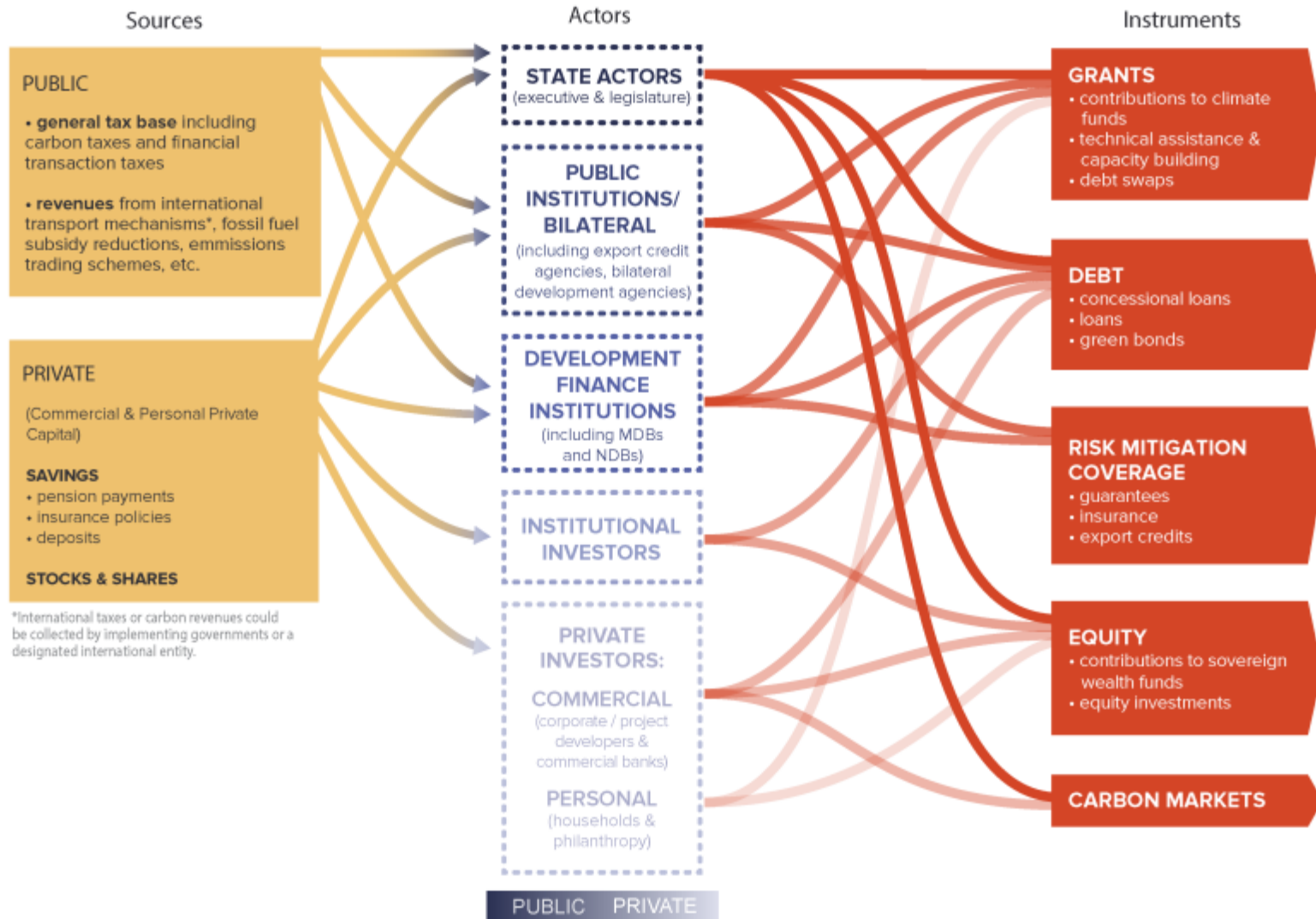
INFRASTRUCTURE: 70% of infrastructure investments will be made in developing and emerging economies to 2030

Percentage of projected infrastructure demand by sector and income group (2015-2030)



Source: Global Commission on the Economy and Climate, 2016, based on Bielenberg et al. (2016) and Bhattacharya et al. (2016)

INFRASTRUCTURE: Both public and private finance will be critical



Source: Global Commission on the Economy and Climate, 2016, based on CPI and CICERO, 2015.

The 2016 Global Commission Action Agenda

Action areas to scale up and shift public and private investments to sustainable infrastructure



Tackle fundamental price distortions



Strengthen investment policy frameworks and capacity



Transform the financial system to deliver the scale and quality of investment needed



Boost investments in clean technology R&D and deployment

INFRASTRUCTURE: Strengthen investment policy frameworks and capacities

- **Critical role of public finance:** In developing countries, **60-65%** of infrastructure projects are financed by public resources; in advanced economies it is 40%.
- **Development Finance Institutions act to catalyse private finance:** They play a pivotal role, generating financing models for sustainable infrastructure that crowd in private finance, including direct investment and building capacities to create pipelines of bankable projects.
 - The **New Development Bank (BRICS)** launched its first 4 investments in April 2016, worth US\$811 million, all for clean energy projects.
- **National infrastructure plans and strategies:** Countries should develop clear national, subnational and sectoral development strategies and infrastructure plans, that are aligned with long-term climate goals.
- All countries should develop **transition plans to accelerate scale-up of clean and resilient energy solutions and a phase-out of coal**, in a way that ensures a just transition.



INFRASTRUCTURE: Transform the financial system to deliver the scale and quality of investment needed

- **Development Finance Institutions** – via their shareholders – should double their investments in financing sustainable infrastructure as quickly as possible, and scale up further as warranted.
- Governments and investors should **agree on common standards for, and scale up, green bonds** as an instrument to enhance liquidity in financial markets and unlock capital for investment.
 - The green bond market reached \$42 billion in 2015, and could double in 2016.
- **Countries**, especially those in the G20, should build on the work of the FSB Task Force on Climate-related Financial Disclosure to **move toward appropriate mandatory disclosure standards** as a matter of corporate governance.
 - Climate-related financial risk disclosure schemes are evolving and some countries now have mandatory disclosure.
- Attracting **institutional investors** to finance sustainable infrastructure would be a big prize: they have an estimated US\$100 trillion in assets under management.



Why do MDBs matter?

- Climate finance shares - nearly half of the public share of climate finance today
- MDBs account for about half of the public development finance flows for infrastructure to developing countries today
 - ✓ 2014 disbursements = \$31 bn*
- Unique access to capital markets, low cost debt capital
- Expertise and convening power

Figure 3: Illustration of funding sources included in the aggregate estimate of climate finance mobilised by developed countries (not to scale)



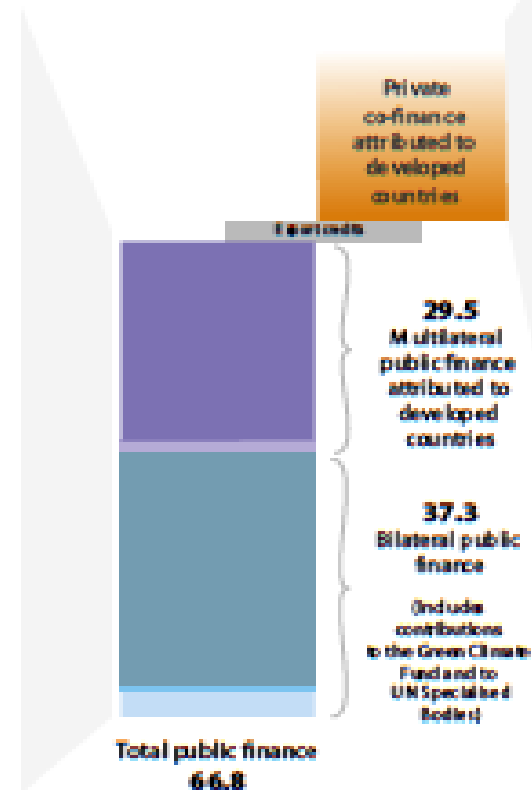
MDBs will need to scale up efforts to support countries to meet climate Paris target - below 2° - and SDGs

- Amongst the MDBs, attention to infrastructure varies as with attention to greening
 - ✓ a few MDBs feature portfolios where infrastructure is dominant, e.g. IsDB, AfDB, AsDB
 - ✓ WBG and AsDB account for more than half of the MDB portfolio
 - ✓ EIB, EBRD amongst the greenest in infrastructure, IsDB, AsDB and AfDB below average
- Transport and energy dominate the MDB infrastructure portfolios but mainstreaming of climate performance criteria varies
- Energy sector leads mainstreaming :
 - ✓ about 50% of energy infra portfolio “greened”
 - ✓ Other sectors lag: transport (20%); WSS (15%)

MDBs (and other DFIs): 5 specific ways to make a difference

- **Direct investment** and lending for sustainable infrastructure: scale up own operations
 - ✓ Borrowing in international, domestic (provider) or local (host country) markets at lower rates than what host country can access due to creditworthiness
- **Crowd-in long-term debt**
 - ✓ Loan syndication, green bonds and other forms of securitisation, allowing primary lenders to recycle
- **Risk mitigation** instruments
- **Mainstream** climate change performance into investment criteria, helping to close viability gap
- **Develop demand** by helping developing-country partners on sustainable infrastructure investment
 - ✓ Reform policies to incentivize & attract private finance
 - ✓ Plan & direct external development finance to SI priorities, tailored to national contexts.

Projected public finance based on pledges as of September 2016 (USD billions)



Key challenge: Coal in Asia power generation - could consume global carbon budget

Table 3

Installed capacity (GW) of coal-fired power plants without carbon capture and storage in select Asian countries and its compatibility with climate stabilisation targets

Country/region	Installed capacity			4°C scenario				2°C scenario			
	2015	2020	2015-2020	2020	2030	2040	2050	2020	2030	2040	2050
China	891	1,054	163	999	1,097	1,120	1,045	934	943	470	145
India	193	296	103	197	251	305	370	181	135	81	30
Indonesia	25	49	24	No estimate available				No estimate available			
Vietnam	11	36	25								
Philippines	6	13	7								
Pakistan	0	6	6								
6 country total	1,126	1,454	328								
ASEAN	No estimate available										
World	1,927	2,334	407	2,155	2,160	2,113	2,120	1,987	1,612	718	271
Source	GCCPT calculations based on Platts March 2016			IEA, Energy Technology Perspectives 2015. 4 degree scenario includes CCS from 2025 for coal and gas. 2 degree scenario includes CSS from 2020, for coal, gas and biomass. (Data here only shows coal without CCS)							
* Notes	Only plants which are operational and with stated commissioning date by 2020 are included, net of plants scheduled to be retired Indonesia country presentation: 29 GW in 2015 Pakistan country presentation: 8 GW in 2020 and 16 GW in 2030 Philippines country presentation: 5 GW in 2015, 10GW in 2020 and 22 GW in 2030 Vietnam country presentation: 11 GW in 2015 and 55 GW in 2030 (2016 Revised Power Sector Development Plan VII)										

Source: World Bank Group GCCPT calculations based on Platts UDI World Electric Power Plants Database (March, 2016) and on International Energy Agency, Energy Technology Perspectives 2015.¹⁹⁰

For more information on the New Climate Economy

- Download reports, country case studies, and working papers: www.newclimateeconomy.report
- Sign up for our mailing list: www.newclimateeconomy.net
- Watch NCE report videos: search New Climate Economy YouTube channel
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Extras

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Mexico



Nicholas Stern (Co-Chair)
IG Patel Professor at the
London School of Economics



Sharan Burrow
General Secretary,
International Trade
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Suma Chakrabarti
President, EBRD



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Water Mission



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**Christian Rynning-
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Kristin Skogen Lund
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Jean Pascal Tricoire
CEO, Schneider
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Maria van der Hoeven
Former Executive
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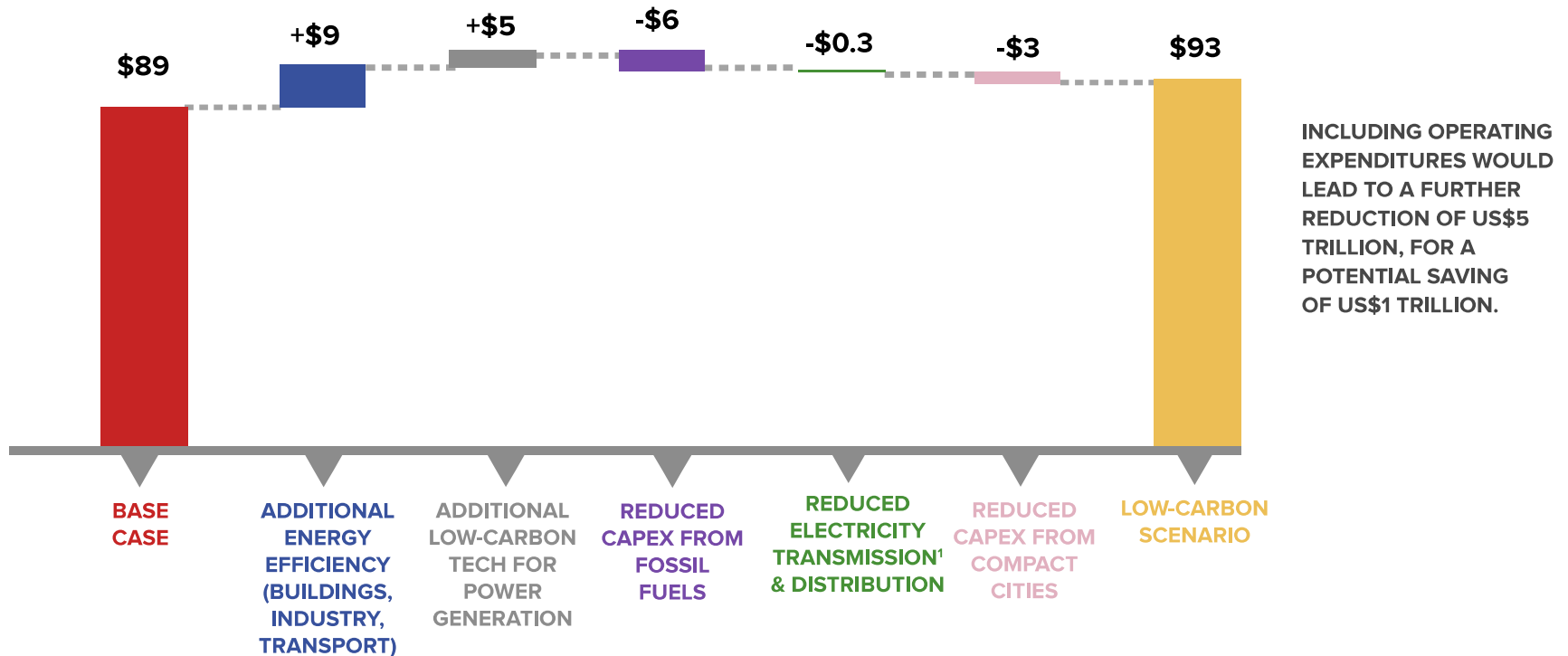
Over 120 organizations engage actively with the project, including:



Investment needs in a low-carbon scenario are comparable to under business-as-usual

**GLOBAL INVESTMENT REQUIREMENTS; 2015 TO 2030,
US\$ TRILLION, CONSTANT 2010 DOLLARS**

Indicative figures only
High rates of uncertainty



INFRASTRUCTURE: Tackle fundamental price distortions

Fossil fuels have significant costs

- Almost 4 million premature deaths each year due to fossil fuel-related air pollution.

Reform fossil fuel subsidies

- Globally, fossil fuel subsidies and tax breaks were about US\$550 billion in 2014.
- In the last three years, almost 30 countries have initiated or accelerated reforms of their fossil fuel subsidies.
- G7 Leaders committed in May 2016 to eliminate inefficient fossil fuel subsidies by no later than 2025. G20 countries and others should follow.

Set a price on carbon

- 40 countries and 20+ cities have implemented or scheduled carbon pricing.
- All developed and emerging economies, and others where possible, should commit to introducing or strengthening carbon pricing by 2020.

Price infrastructure services appropriately (for both traditional and ecosystem-based infrastructure)



INFRASTRUCTURE: Boost investment in clean technology R&D and deployment

- **Faster deployment of existing technologies** is critical to meeting global goals.
- **New technologies and practices** can significantly reduce upfront costs of sustainable infrastructure over the long-term.
- **Energy-sector public RD&D should be scaled-up:** it is less than half what it was in the late 1980s in real terms, and some still supports fossil fuel production.
- **Multi-partner global co-operation is essential:** several promising initiatives are aiming to boost investment in innovation with climate change as a central theme, including: Mission Innovation, the Breakthrough Energy Coalition, CGIAR, Low-Carbon Technology Partnerships initiative.
- **Governments and businesses** should substantially increase investments in R&D and deployment, and develop genuine research partnerships together and across countries.



INFRASTRUCTURE: Global Commission Recommendations (2014 and 2015)

- Substantially reduce the capital cost of low-carbon infrastructure investment. (NCE, 2014)
 - Donors, multilateral and national development banks should review all lending and investment policies and practices, and **phase out financing of high-carbon projects** and strategies in urban, land use and energy systems.
 - Governments and multilateral and national development banks should help provide new and existing financing institutions with the right **skills and capacity to provide finance for low-carbon and climate-resilient infrastructure**, and to **leverage private finance towards this goal**.
 - Accelerate a low-carbon transformation by **integrating climate action and risk** into strategic economic decision-making.
- Ensure new infrastructure is climate-smart. (NCE, 2015)
 - G20 and other countries should adopt key principles ensuring **the integration of climate risk and climate objectives in national infrastructure policies and plans**. These principles should be included in the G20 Global Infrastructure Initiative, and used to guide the investment strategies of public and private finance institutions, particularly development banks.