



International Institute for
Applied Systems Analysis
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TWI2050
The World in 2050



Advancing STI for SDG 7 and Synergies with other SDGs

Nebojsa Nakicenovic

Deputy Director General

International Institute for Applied Systems Analysis

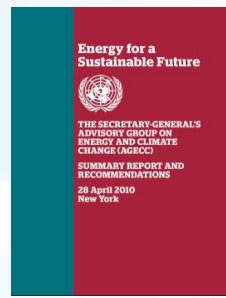
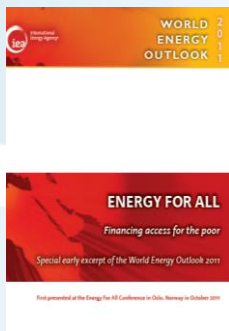
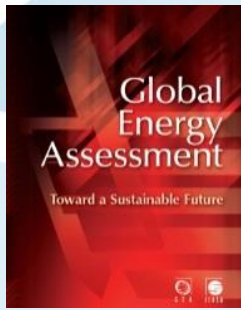
Professor Emeritus of Energy Economics

Vienna University of Technology

Session 9: STI for access to affordable, reliable, sustainable and modern energy for all (SDG 7), STI Forum for SDGs, UN – 6 June 2018



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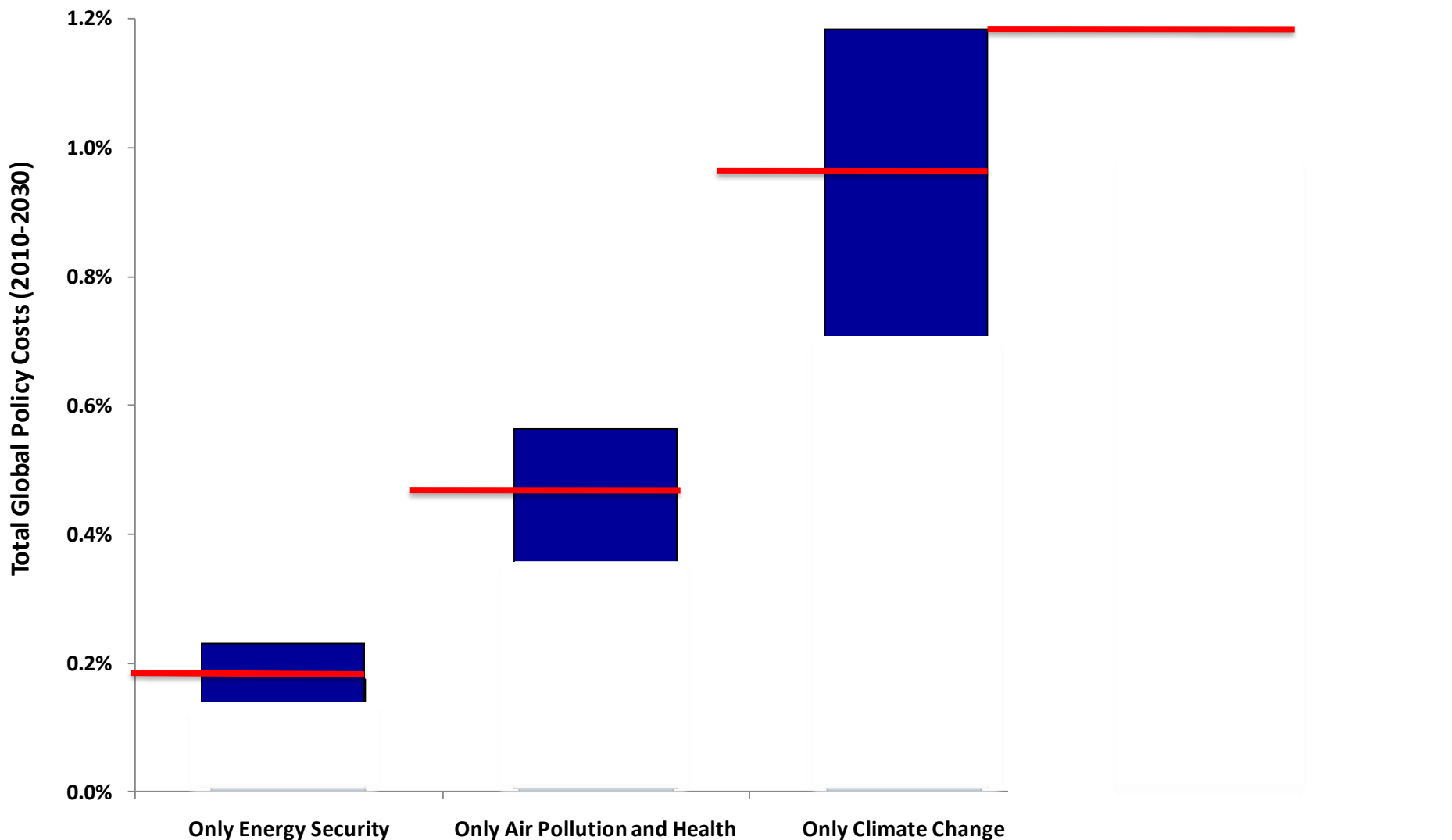
2030 SDG7 Goal and Targets

- Universal Access to Modern Energy
- Double Energy Efficiency Improvement
- Double Renewable Share in Final Energy

Promote STI, Cooperation & Investment

Aspirational & Ambitious but Achievable

Multiple Benefits of Integrated Policies





SUSTAINABLE DEVELOPMENT GOALS





SUSTAINABLE DEVELOPMENT GOALS

1 NO POVERTY

2 ZERO HUNGER

3 GOOD HEALTH AND WELL-BEING

4 QUALITY EDUCATION

5 GENDER EQUALITY

6 CLEAN WATER AND SANITATION

7 AFFORDABLE AND CLEAN ENERGY

8 DECENT WORK AND ECONOMIC GROWTH

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

10 REDUCED INEQUALITIES

11 SUSTAINABLE CITIES AND COMMUNITIES

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

13 CLIMATE ACTION

14 LIFE BELOW WATER

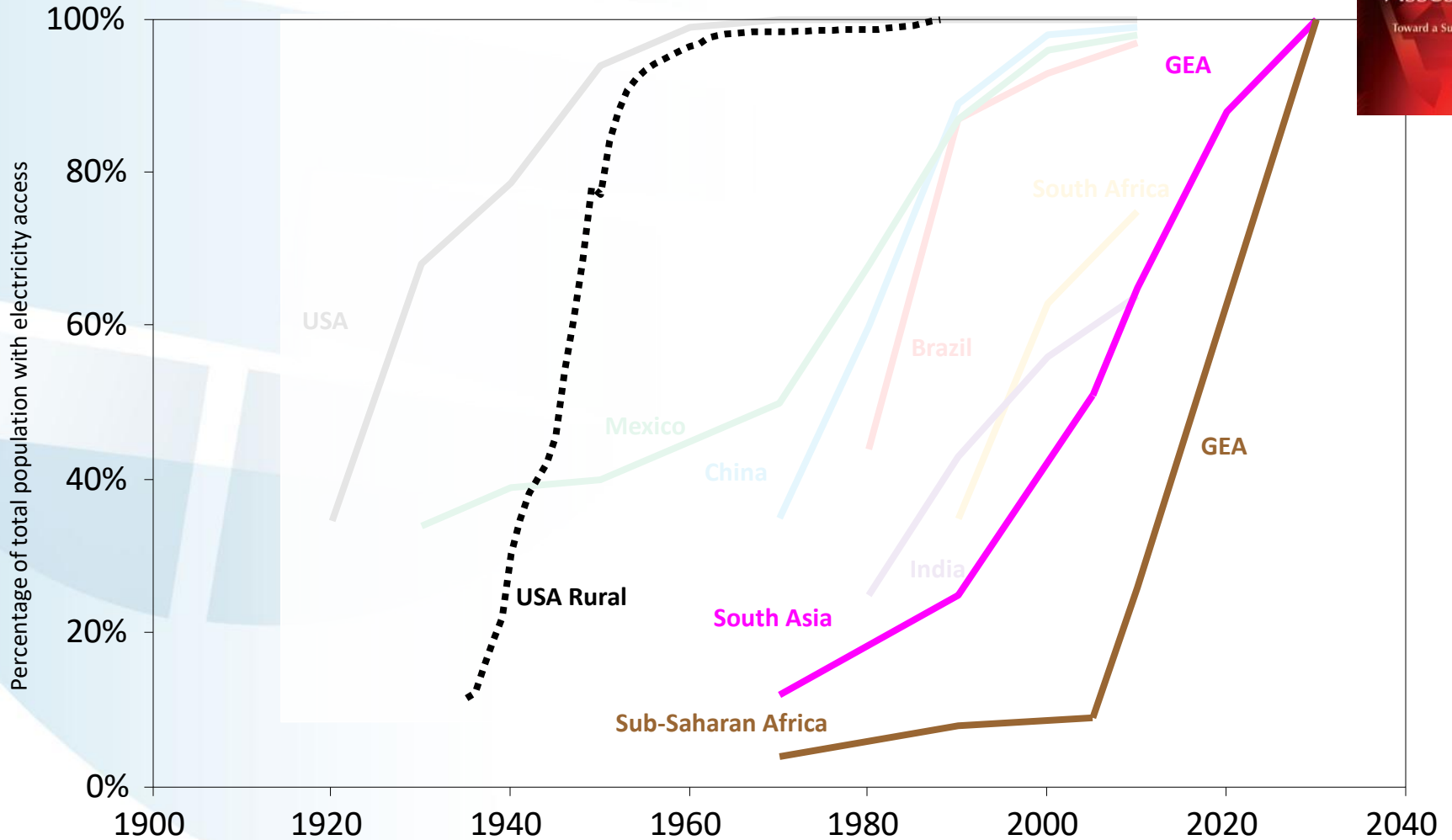
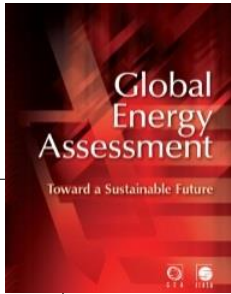
15 LIFE ON LAND

16 PEACE, JUSTICE AND STRONG INSTITUTIONS

17 PARTNERSHIPS FOR THE GOALS

SUSTAINABLE DEVELOPMENT GOALS

Electrification



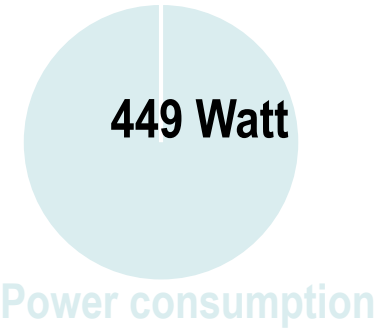
Impact of ICT Convergence: SDG7

5 Watt

2.2 Watt



=



Source: adapted from Grubler et al., (in press), *Nature Energy*

Mobile Phones Charging



Source: Modi, 2011

TWI2050 Report Outline

Key Messages

Synthesis

1. Framing and Introduction
2. Mega-transformations
3. Narrative and Overarching Goals
4. Sustainable Development Pathways
5. Governing the Great Transformation



TWI2050 Writing Meeting
5-7 March 2018, IIASA

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Energy

Decarbonization, efficiency
energy access



Sustainable consumption & production

Resource use, circular economy
sufficiency, pollution



Food & biosphere

Sustainable
intensification, ocean
biodiversity, forests
and water, healthy
diets, nutrients



SDGs:

Prosperity
Social inclusion
Sustainability



Digital Revolution

Artificial intelligence
big data, biotech, nanotech
autonomous systems

Smart Cities

Housing, mobility
sustainable infrastructure
water, pollution

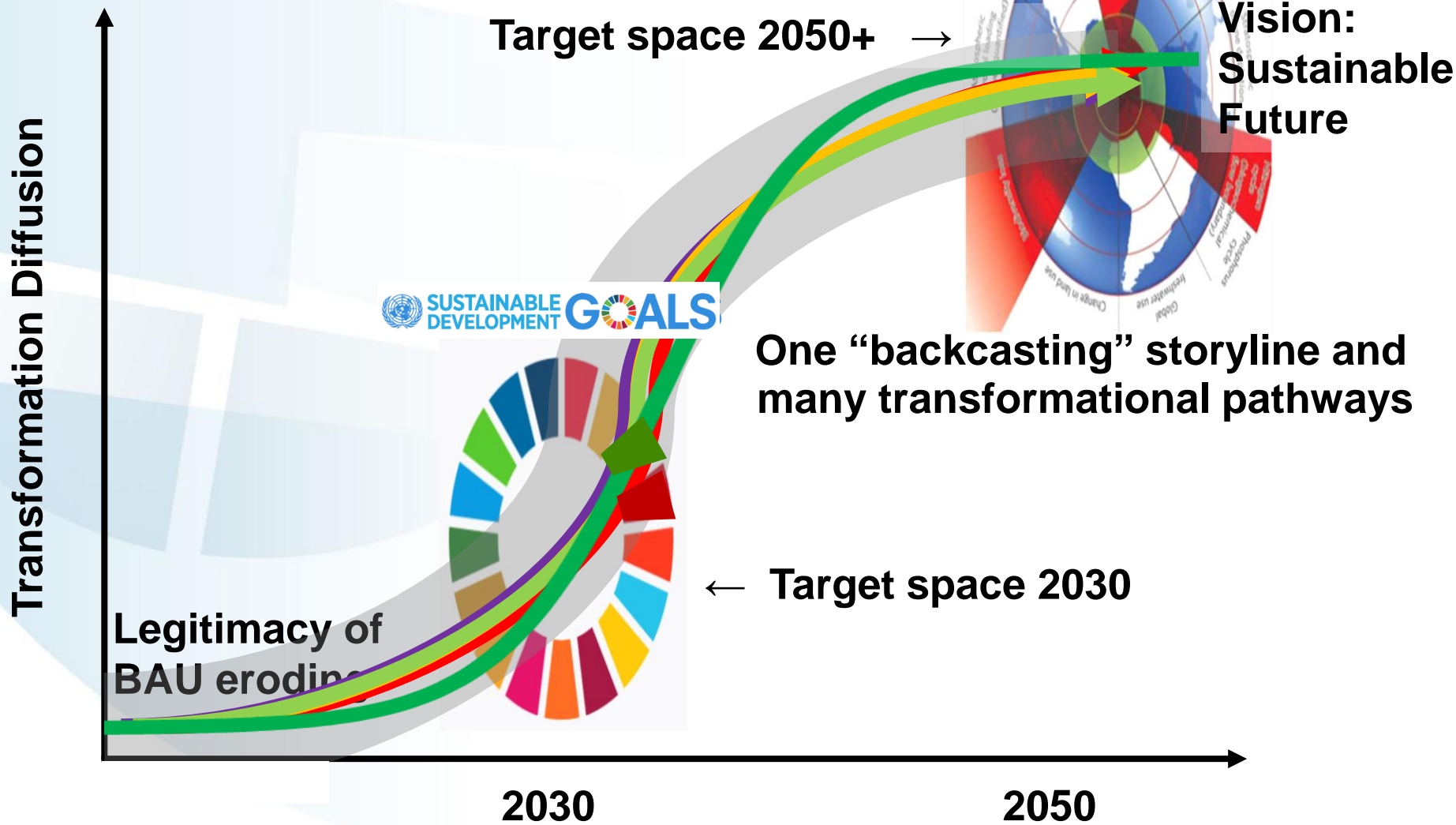


Human capacities & demography

Education, health, ageing
labor market, gender, inequalities

2018 #10

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THANK YOU



science for global insight

naki@iiasa.ac.at



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