Enabling Advanced Reactors for the Market

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Facing Twin Problems: Poverty and Climate Change

World Population
Projected world population until 2100

- 1990: 5.3 billion
- 2015: 7.3 billion
- 2030: 8.5 billion
- 2050: 9.7 billion
- 2100: 11.2 billion

Energy Access is Essential to Quality of Life

To achieve the desired quality of life, people need about 3,000 kW hrs/yr

Source: United Nations Development Program; McFarlane 2006
Results: Vulnerability

Overall vulnerability to the impacts of population growth and climate change on grazing livestock and their contribution to food security

Most vulnerable nations:
Kenya
Burundi
Eritrea

Most vulnerable region: South Asia
Most vulnerable income group: Lower middle income
Most vulnerable developed status: Developing

Source: Global Climate Change Policy Volume 20, Issue 10; Godber and Wall, 2014
TerraPower’s Traveling Wave Reactor (TWR)

Benefitting from a Simplified Fuel Cycle
Molten Chloride Fast Reactor (MCFR)

Making Better Use of Reactor Heat
Ten Years: Progress Toward TWR Deployment

2006: Need for new energy resources to raise global living standards

2007: Work on TWR begins

2008: TerraPower officially launched

2009: Commissioned computing cluster

2011: Established materials development program

2015: MOU with CNNC for TWR development

2017: Formed the Global Innovation Nuclear Energy Technology Co., Ltd. with CNNC
Economics and public concerns remain a challenge to significant nuclear expansion.
Thank You

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