

# Strategic Priorities for Adoption of Emerging Technologies in the Energy Sector for Climate Change Mitigation

**78<sup>th</sup> session of the UN ESCAP**

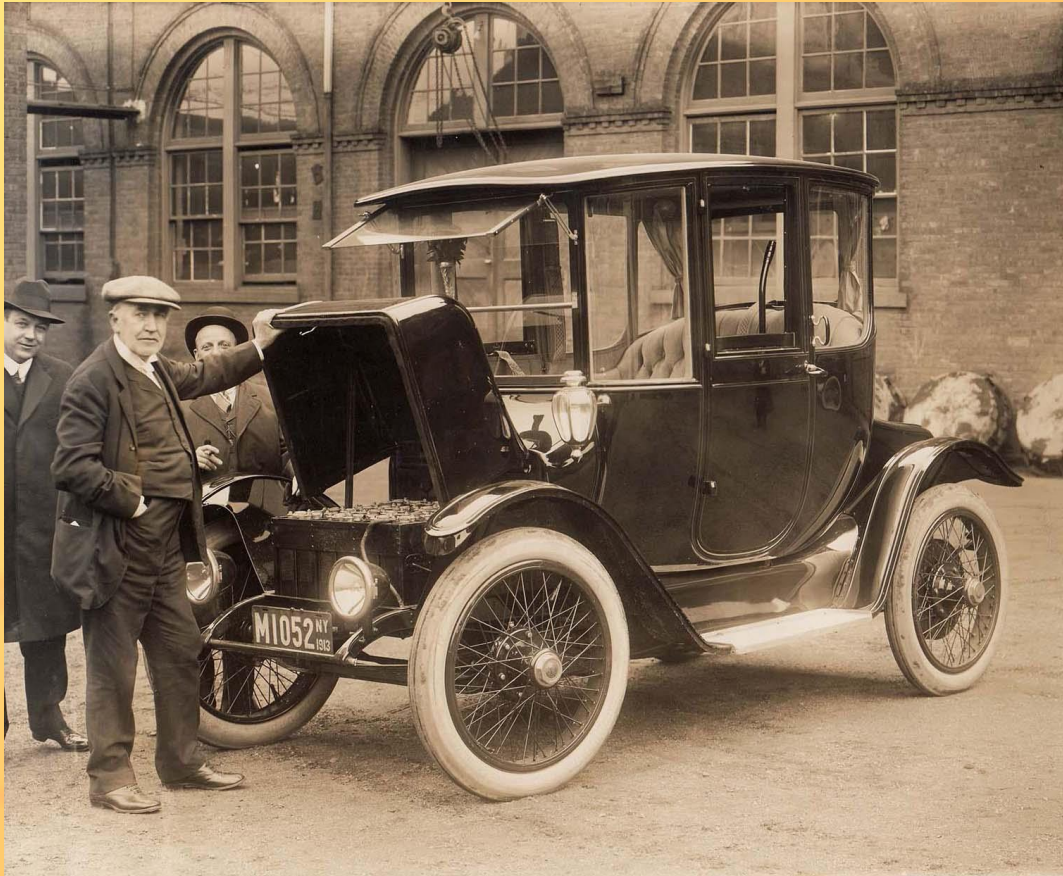
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**Ajay Mathur**

*Director General, International Solar Alliance*



*There is plenty of precedent for technological innovations being way ahead of its time...*



▲ *Despite the current uptick in adoption, the first electric cars were roaming the streets during the 19<sup>th</sup> century*

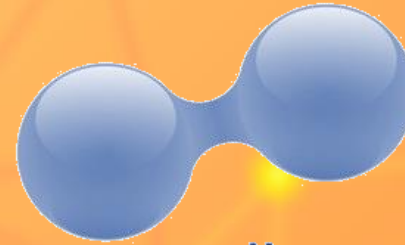


▲ *Charles Fritts installed the first solar panels on New York City rooftop in 1884*

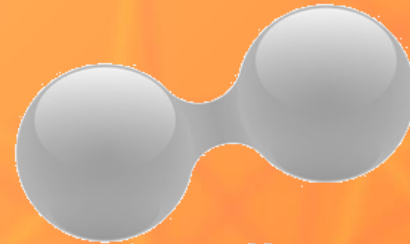
*... and plenty of precedent for promising technologies going obsolete or being dead on arrival*



▲ *Methanol as a fuel for replacing fossil fuels*



$H_2$



$H_2$

▲ *Blue and Grey Hydrogen as a "clean" precursor for the green hydrogen economy*



# *A word of caution - Adoption of emerging technologies must follow the scientific method*

*Does the technology...*

- *... agree with the fundamentals?*
- *... stand up to independent experimentation?*
- *... perform well under real world conditions as it did in the lab?*
- *... perform well at scale as it did in the lab?*

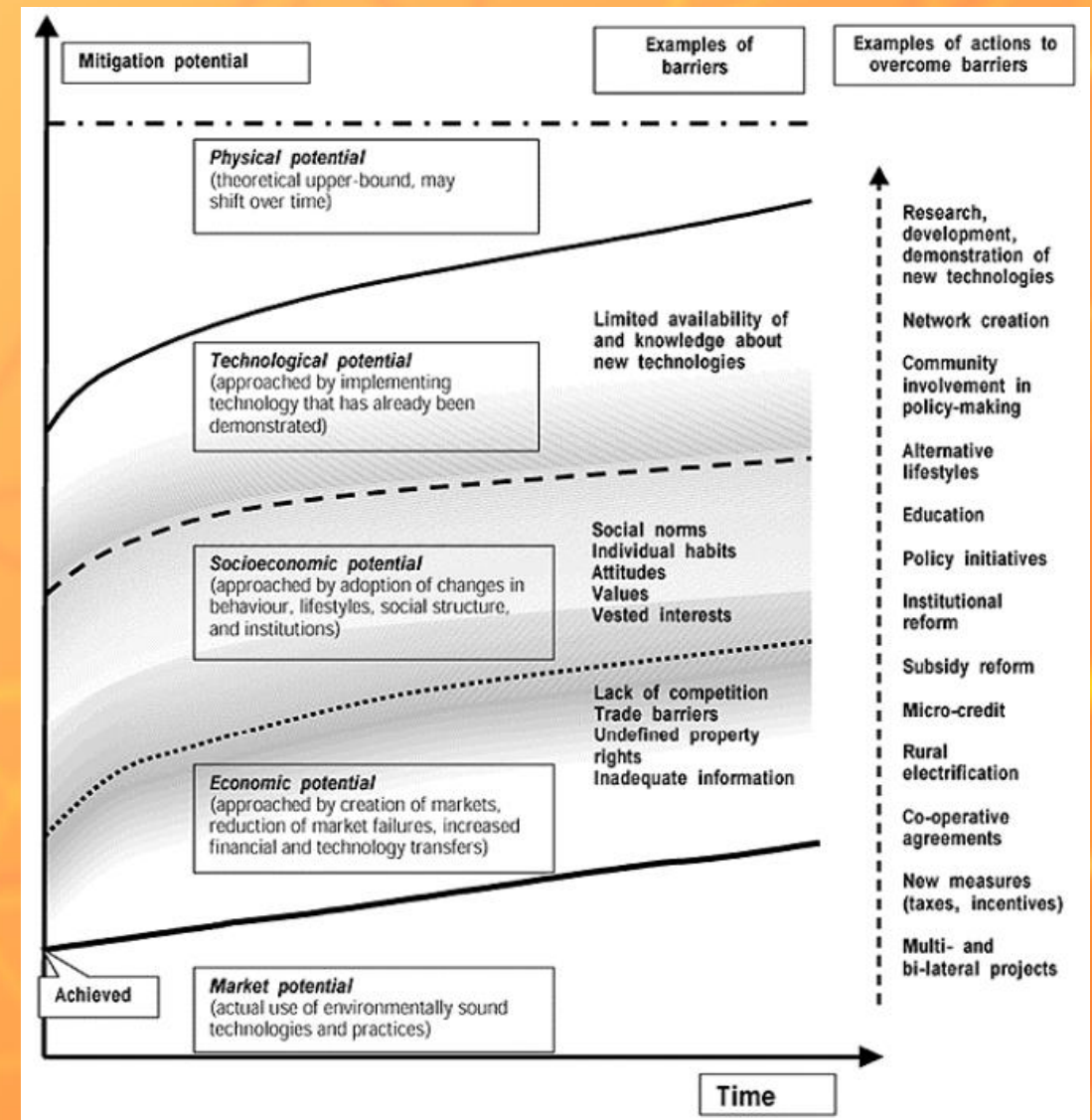
*Or is it just...*

- *... part of a hype?*
- *... an attempt at forced disruption?*
- *... correlation being masked as causation?*

# For emerging technologies to take root, nurture the right environment with policy tools

- Market creation activities
- Subsidising R&D
- Setting technology & performance standards
- Subsidising dissemination of technology
- Taxation and cap-and-trade systems
- Policy mixes – Price mechanisms, regulatory measures,
- International collaborations and technology transfer policies

Source: OECD – IEA Information Paper on Technology Innovation, Development and Diffusion



Source: IPCC, TAR, Volume 3, TS

# *Measures to Promote Technology Transfer depends on where we are ...*

*Is the technology...*

- *... already used ?                      Demand creation/ expansion*
- *... in need of tweaking ?              Upgradation of standards*
- *... in need of R&D inputs?          Link manufacturing, demand and R&D*
- *... in need of manufacturing ?      PLI*

*Capacity building*



*Thank You*

***Ajay Mathur***

*Director General, International Solar Alliance*