

Considering (Energy) Technology within the UN Climate Change Negotiations... and Beyond

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We are not starting from scratch

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Towards a “just” transition

- Public programmes must be “catalytic” in some way
 - A big word, that is complex – watch assumptions about success
 - Other big words: cooperation, innovation, networks, capacity, technology, markets, etc.
- The relationship between climate and energy policy needs to be carefully considered
- Capacity building is fundamental – Centres are very useful in this regard
 - This will take time! The Indian CIC 10 year plan is realistic
- A Centre will find it difficult to do everything from dealing with VC to R&D
 - Picking technologies is one part
 - Picking priorities like information vs grants vs policy analysis vs business support vs tech vs standard support is another

“Firms that recognise the [climate] challenge early, and respond imaginatively and constructively, will create opportunities for themselves and thereby prosper. Others, slower to realise what is going on or electing to ignore it, will likely do markedly less well (Lehman Brothers, 2007).”

“Businesses which prepare for and take advantage of the new energy reality will prosper — failure to do so could be catastrophic (Lloyds, 2010).”

Technology in the climate negotiations

There is an urgent need to discover what effective language Copenhagen agreement needs to entail in order to unleash the full potential of technology (de Boer).

- Don't wait for the UNFCCC! (sorry Andrew)
- Technology has moved from a relatively marginal topic to a central one
 - A framework exists in UNFCCC (Art. 4.1c, 4.5)
- Definition still required for some “big” words and acronyms
 - e.g. MRV, NAMA, Sectoral, Cooperation, Centres
- Copenhagen text gave an opening for Centres
 - Technology Mechanism – evolving the EGTT
 - Technology Executive Committee (TEC)
 - Technology Centres and Network (CTC)

Precedents

- Precedents exist (UNIDO/UNEP NCPC, ICHET, European energy agencies, etc.)
 - The EU agencies
 - range across a continuum of functions – usually beginning from information dissemination through to market regulation
 - They have a network called EnR – its efficacy is questionable
 - Some have failed
 - Be careful about assuming moving to private sector model is correct (UK)
 - Infodev studies and centres
 - UN-Energy as an interagency mechanism
 - National efforts (CICs, ICHET, etc.)
 - Regional efforts (ECREEE)
 - CEM efforts on Centres and Networks
 - CLEAN, NREL/UNIDPO analysis portal

A word on energy policy

- The energy policy process is inherently different to the climate change policy process
 - It is equally complex, but in very different ways
 - Its language and acronyms are different
 - It has a different temporal focus
 - Its understanding of R&D is different
 - Its links to private sector are integral
 - The climate negotiators are generally not from energy departments
 - The decision-makers and stakeholders have different skill-sets and motivations
 - It has the bulk of the policy and regulatory “levers” (and associated budgets)
 - It is familiar with markets and trading
 - The current focus is on price (and security)

A PPP example

Efficient Lighting for Developing and Emerging Countries

- The en.lighten initiative aims to promote, accelerate and coordinate global efforts to push for global efficient lighting. In doing so it will strengthen capacities in governments, private sector, and civil society to lead lighting market transformation programmes
- en.lighten is a UNEP initiative supported by the GEF Earth Fund, OSRAM GmbH, Phillips Lighting. A Project Steering Committee composed of project partners and collaborating UN agencies (UNDP, UNIDO) and institutions (e.g. World Bank) provides strategic guidance and advice.

Conclusions

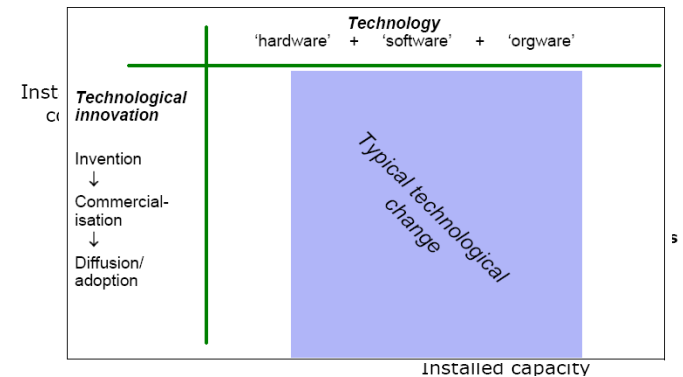
- We are not starting from scratch - we (probably) have enough vocabulary, and we have action ongoing.
 - The India and Kenya CIC examples highlight this.
- Policy approaches need to be appropriate to conditions, skills, technology, markets, regions – differentiation is critical (but a loaded term)
- Funding for human and institutional capacity building and enabling environments is likely the best way to ensure deployment (and value-for-money)
 - Centres cant do everything – not the whole chain!
 - They take time to develop – lots of it
 - Networks are difficult to make work – need an impetus
 - Don't assume success is equivalent to not requiring public funds
 - Must be aligned with national plans and agencies (NAMA, NAPA, TNAs, etc.)
 - EE as well as RE
 - Climate vs energy access?
 - Not just mitigation, but hard to combine adaptation concepts under same umbrella – concepts can become diffuse
- UNFCCC can't do everything – transacting this only because of climate impetus will not suffice
- Carefully consider energy policy when trying to address climate policy
- New innovative PPPs (non-traditional infrastructure) are essential...and difficult to formulate

Annex

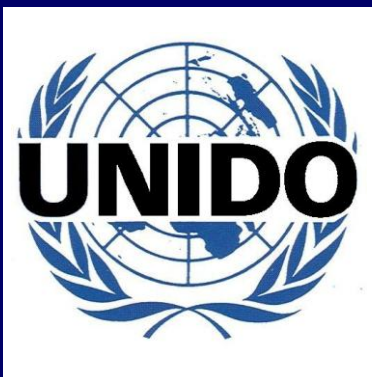
Technology is a big word...as is Innovation

Technology is the main driving force of productivity and economic growth. Historical studies attribute about half of economic growth to technological change and the other half to the combined effect of all other driving forces (IIASA).

- Spans many disciplines
 - Leads to communication gaps
 - Is essential for private sector participation
- IIASA frame
 - Hardware, orgware, software + “marketware”
- More than just transfer, or incubation, or R&D, etc.
- Tech development and innovation is not a linear process



We need policies not (just)schematics



U N I T E D
N A T I O N S
I N D U S T R I A L
D E V E L O P M E N T
O R G A N I Z A T I O N



I N T E R N A T I O N A L
C E N T R E F O R
H Y D R O G E N
E N E R G Y
T E C H N O L O G I E S

Mission:

The International Centre for Hydrogen Energy Technologies is a UNIDO centre with the mission of demonstrating viable implementations of hydrogen energy technologies and facilitating their widespread use in developing countries.





UNIDO-ICHET Background

- UNIDO-ICHET is located in Istanbul, Turkey
- Formed in 2003 – trust fund agreement between UNIDO and Turkish Government (Ministry of Energy and Natural Resources)
- Started operation in 2004
- Budget \$40M over 5 years
- Currently, staff of about 35 people





UNIDO-ICHET Activities

■ Design and implementation of demonstration projects

- H2 3-wheelers, New Delhi, India
- Bozca Hydrogen island, Turkey
- FC-based UPS, Turkey
- Fuel cell fork-lift, Turkey
- Hydrogen FC boat, Turkey

■ R&D projects / Test laboratories

- PEM FCs
- Bio-electrolysis
- Photo-electrolysis

■ Conferences and workshops

■ Training and education

■ Networking on Hydrogen Islands

■ Support to UNIDO Director General

