Future Smart Cities and Impacts on Governance

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Two Introductory Assumptions
Governance as a Comprehensive Concept
Smart Energy as a Conditio Sine Qua Non to Future Smart Cities

- **The concept of Governance means:**

✓ a more inclusive concept than government, reflecting the negotiation between **society** and **government** in effectively implementing socially acceptable allocation and regulation by mediating behavior through values, norms and laws.

✓ broader than just the government, incorporating both ***state and non-state actors, both private and public.***

✓ relating to the ***network*** of private and public actors, which interact to solve societal issues.

✓ Non-governmental actors are no longer seen as “passive citizens, but as active stakeholders through their participation in public-private networks and interactions

- **Smart Energy Supporting Smart Cities**

Smart Energy Supporting Smart Cities- The Seventh Axe

- **Smart Economy** includes factors all around economic competitiveness as innovation, trademarks, productivity and flexibility of the labour market aswell as the integration in the (inter-)national market.

- **Smart People** includes the level of qualification or education of the citizens as well as the quality of social interactions regarding integration and public life and the openness towards the “outer” world.

- **Smart Governance** comprises aspects of political participation, services for citizens as well as the functioning of the administration.

- **Smart Mobility** includes local and international accessibility as well as of the availability of information and communication technologies and modern and sustainable transport systems.

- **Smart Environment** includes natural conditions (climate, green space etc.), pollution, resource management and efforts towards environmental protection.

- **Smart Living** comprises various aspects of quality of life as culture, health, safety, housing, tourism etc.

Assessing the impact of Smart Cities on Governance needs to:

- ✓ **Understand Governance Indicators in different levels**
- ✓ **Assess the relationship between Smart Energy Smart Cities**
- ✓ **Evaluate the implications of this relationship on Governance Indicators**

Impacts on Global Governance Indicators as an Example

- **Voice and Accountability** – universal and global aspects of ***Smart Energy Smart City*** provide better transparency due to different actors (not only politicians and governors share the responsibilities, but also public-private partnerships play an important role in global governance.
- **Political Stability and Absence of Violence- *Smart Energy Smart City:***

✓ provide sustainable energy that contributes to moderate political, social threats and challenges evoked by future environmental and natural resources scarcities and deficiencies concerning conventional technologies.

✓ bring economical benefits to remote communities

✓ create jobs, regional development and long term economic growth.

✓ support ***Energy security*** that lessens dependence on fossil and imported fuels and thus affects the concept of this dependency on international and political constraints.

Impacts on Global Governance Indicators

- ***Regulatory Quality*** –Policy and regulatory measures to promote ***Smart Energy Smart City*** innovative measures will help foster Governance in regulatory quality. The impact on environmental regulation measures should examine both in regulating the innovative technological aspects as well as their distribution.
- ***Rule of Law – Smart Energy Smart City*** promotes energy justice and provokes environmental law in national and international levels.

Impacts on Global Governance Indicators

- ***Control of Corruption*** – This indicator is linked to all Governance indicators and specifically concerns the energy sector that is a prime target for, and source of corruption, in part because of the time-sensitive nature of energy resources, the possibilities of generating considerable economic rents from energy extraction, transformation and use, as well as the need for large capital investments and a central role of government agencies to oversee virtually all aspects of the energy sector –whether privatized or not.

- **The forms of corruption depend on:**

✓ features of the supply chain of specific energy sources

✓ the significance of these sources in the local and national economy, the sociopolitical and institutional context within which extraction, transformation and use occur

✓ the number of individuals participating in decision making, and the cultural environment within which decisions are made. ***A lack of transparency*** of decisions and accounting methods, as well as a lack of effectiveness of legal systems may help hide and sanction abuse of power by decision makers.

POINTS FOR DISCUSSION-

Levels of Governance and their interconnected character

- **Individual or Self Governance**
- **National or State Governance**
- **Global Governance**

Smart Energy and Politics

Smart Energy and Cyber Security

SMART GRIDS ,SMART CITIES, CRITICAL INFRASTRUCTURES AND CYBER THREATS

•**TERM EXPLANATION**: **Smart grids** represent the cutting edge of energy efficient technologies, applied in energy production, distribution and householder use.

•Smart grids are modernised electricity grids that interact with information technology and communications infrastructure to provide greater transparency on energy use to consumers, and to improve the quality of energy supply.

•Smart grids more easily integrate renewable and distributed energy sources into the grid, like solar, wind and co-generation plants.

•Smart grids are more reliable, with fewer and shorter blackouts. They allow electric vehicles to be charged when demand on the network is low, and their combined battery storage can be used to support the network when demand is high.

•Consumers need no longer be passive receivers of power, but instead can take charge of their energy use and make meaningful decisions that will benefit both the environment and their hip pockets. Household appliances can be programmed or directly controlled by the network to run

when it is most cost-effective.