To the kind attention of Ms. Pinho, M. Ermacora, Ms. Colucci and Ms. Abreu Marques
European Commission - Directorate General for Energy
Rue Demot 24
1040 Brussels

Brussels, 13 February 2019

Addressing demand-side flexibility and system efficiency in the National Energy & Climate Plans

Dear Heads of unit,

Our organisations are all strong advocates for European policies that give citizens and businesses control over their energy future through efficient, competitive and digital solutions. Demand-side flexibility and system efficiency are remarkable resources that not only benefits and empowers consumers, but also reduces total system demands and costs, enables renewables integration and contributes to building Europe's clean and smart energy leadership.

The National Energy and Climate Plans (NECPs) foreseen by the Governance Regulation are an excellent opportunity to unleash its potential and address structural market failures in this area. Because they will shape national energy policies for the next decade, they can be the cornerstone of the New Deal for Energy Consumers promised by the Clean Energy Package for all Europeans.

However, most draft plans submitted so far by Member States fall short of this objective. They usually lack a proper assessment of system flexibility challenges and of the necessary infrastructure investments for energy grids and, especially for the local distribution network levels. Neither do they provide estimation of current and expected development of demand-side resources to match those current and future needs. They further fail to identify entry barriers and often assume that the market for these solutions will develop on its own.

Not delivering this demand-side potential would undermine Europe's decarbonisation efforts and limit its competitiveness in developing this important industry sector. NECPs represent a straightforward and immediate first step to grasp growth opportunities associated to its development. By putting in place concrete policies, Member States have a unique opportunity to accelerate the development of a clean energy system based on end-consumer empowerment.

Therefore, our organisations invite the European Commission and Member States to use the set of key performance indicators proposed in the annex to this letter when assessing and updating their NECPs. These indicators will provide a helpful benchmark of countries' ambition on demand-side flexibility and system efficiency and outline a way forward for its uptake.

We would welcome the opportunity to have a meeting between your services and a delegation of our organisations in the forthcoming weeks to discuss these points in further details.

Yours sincerely,

The signatories

ANNEX: PROPOSAL OF KEY PERFORMANCE INDICATORS FOR THE ASSESSMENT OF NATIONAL ENERGY AND CLIMATE PLANS

KPIs related to specific providers of demand-side flexibility and system efficiency

- **Demand response:**
  - Volumes of demand side response delivered in all relevant markets[1] (MW or MWh), per type of providers (residential, commercial, industrial), total market share (vs. generators) and number of aggregators companies active (independent and vertically integrated)
  - Availability of contract offers featuring dynamic pricing and time-varying network tariffs to consumers and incentive schemes for demand response aggregators
  - Availability of feedback channel (e.g. in-home-display, smart phone app) to the consumer together with the smart meter
  - National objective (or estimation) for increasing demand side response measures offered by consumers including supporting measures and a timeframe for when the objective shall be met

- **Self-consumption**:
  - Volumes of self-consumption per type of clients (residential, commercial, industrial) and per type of connection (grid connected or off-grid)
  - National objective (or estimation) for increasing self-consumption including supporting measures and a timeframe for when the objective shall be met

- **Heating**:
  - National objective (or estimation) for developing flexibility and system efficiency from cleaner heating systems (incl. smart buildings, cogeneration, individual as well as large heat pumps connected to district heating & cooling networks) including supporting measures and a timeframe for when the objective shall be met
  - Number of heat pumps ready for demand side flexibility/"energy smart appliance" (as defined by Ecodesign Preparatory Study on Smart Appliances - Lot 33), number of heat pumps operating under a dynamic price scheme (as specified in art. 11 of the Electricity Directive)
  - Volumes of cogeneration (% share in total electricity and heat generation and current growth potential) as well as its cross-energy vector flexibility potential (linking electricity, heat and gas) in combination with DHC and different types of storage
  - National implementation and promotion of the smart readiness indicator of buildings

[1] Wholesale electricity market, ancillary services markets, availability contracts with TSOs or DSOs, capacity remuneration mechanism









- **Transport**:
  - Number of electric vehicles (million units and % of consumers covered) and recharging stations per type of consumers (residential, commercial, public) and per type of connection (standard, fast chargers)
  - Availability of network tariff structures that incentive smart charging (e.g. Time-of-Use network tariff)
  - National objective (or estimation) for developing vehicles to grid flexibility including supporting measures and a timeframe for when the objective shall be met

- **Smart grids:**
  - Number of lines operated under dynamic line rating and of remotely-monitored and real-time controlled substations
  - Roll-out plan for smart meters (million units and % of consumers covered)
  - National objective (or estimation) for improving grid smartness including supporting measures and a timeframe for when the objective shall be met

- **Storage:**
  - Installed capacity of energy storage resources (MW) connected to the electricity grid and volumes delivered to all relevant markets (MWh or MW) per type of technologies (batteries with interoperable capabilities, pumped-hydro, flywheels, CAES…)
  - Installed capacity of electrolysers (MW) and specific regulatory framework for Power-to-Gas applications
  - National objective (or estimation) for promoting all energy storage technologies (electricity, power-to-x & heat…) including supporting measures, such as favourable tariff structures and other financially-based incentives, and a timeframe for when the objective shall be met

Horizontal KPIs related to system flexibility challenges

- Evaluation of current and future flexibility needs at different time scales in line with the national renewable trajectories (e.g. very fast frequency response, synchronous inertia type services, operational reserve dimensioning needs, hourly ramping constraints etc.)
- Measures taken to include flexibility needs in transmission and distribution grid planning (cf. art. 32 of Electricity Directive), adequacy assessment and market design (procurement rules, prequalification process etc.)
- Measures to monitor and develop a smarter electricity grid (cf. art. 59(1) of Electricity Directive) e.g. creation of a dedicated platform or dialogue between system users and grid operators, public reporting of key grid performance indicators (e.g. frequency and duration of power interruptions) and measures via the different sector indicators mentioned