The European Association of the Electricity Transmission and Distribution Equipment and Services Industry

Brussels, 12th December 2013

T&D Europe[1] Position Paper

Proposal for a Directive of the European Parliament and of the Council on the deployment of alternative fuels infrastructure (COM (2013) 18 final)

The challenge

Ports are key in the global transport network as ships account for 90% of the world's commercial goods transports. **To keep a leading role in the global trade** and face growth of Asian ports (only 4 European ports are currently on the top 20 container ports) European ports need to invest in infrastructure to compete. Moreover, ports are **key for the tourism market**. Europe is the second most attractive market for cruise tourism. To keep its leadership in this field, Europe needs to promote passengers (cruise and ferry) ports infrastructure but also the condition of the air around these areas to preserve their attractiveness.

Nevertheless, **Shipping is a major cause of harmful air pollution in Europe**. For example, by 2020 emissions of NOx from shipping could exceed the emissions of these pollutants from all other sources in the EU. The impact of pollution is highly dependent on the proximity of the emission sources. In harbour cities, ship emissions have become a dominant source of urban pollution and need to be addressed, in particular when considering fine particulate matter (PM) emissions. Indeed, those emissions can induce asthma, bronchitis and heart failure. Recent studies *(Assessment of Health Cost Externalities of Air Pollution at the National Level using the EVA Model System, March 2011, Brandt et al[2])* show that emissions from international **shipping cause the premature deaths of about 50000 people/year in Europe** with an **annual cost for society estimated at €58B** and could represent 12% of total health costs by 2020 if no action is taken. Moreover, the level of PM emissions in harbour areas reaches limit that blocks future investments.

The solution

[1] *T&D Europe is the European Association of the Electricity Transmission and Distribution Equipment and Services Industry, representing the European manufacturers of technology and providers of service solutions for the transmission and distribution of electricity in Europe and globally. We are actively engaged with the development of the EU energy policy, the completion of its 20/20/20 objectives for 2020 and the preparation of a strategy for 2050. The companies represented by T&D Europe account for a production worth over Euro 25 billion, and employ over 200,000 people in Europe.*

[2] http://www.atmos-chem-phys-discuss.net/13/5923/2013/acpd-13-5923-2013-print.pdf

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There are currently several technological alternatives to reduce shipping emissions: LNG, scrubber and shore-side electricity.

Each of these alternatives helps to reduce emissions, in their specific field of application. LNG and scrubber are the alternatives for ships during sailing. Shore-side electricity is the alternative for berthed ships in harbours. While LNG and scrubber reduce emissions during sailing, shore-side electricity cuts the already reduced emissions further down to zero, at berth. Providing an emissions-reduction solution both at the sea and in ports, these technologies are mutually complementary.

T&D Europe supports shore-side electricity. This technology enables ships at berth to plug into the national grid and so to shut down their engines, eliminating noise, vibration and air pollution. It is a standardized technology which is ready to market. The main advantages of this system, compared with other alternatives are presented below:

- Environmental:
  - Shore-side electricity is the **only solution to cut all ships' emissions** in ports when berthed: VOC, SOx, NOx, CO, CO2, PM, N2O, CH4.
  - **Shore-side electricity is cleaner than LNG or scrubber for berthed ships. It completely eliminates emissions in NOx, CO, CO2, N2O, which LNG does not.** LNG even increases **CH4 emissions. CH4 has a 25 times higher global warming potential than CO2.**
  - **Both LNG and scrubbers have no impact on noise and vibration reduction.**
  - Scrubber technology cannot reduce several emissions simultaneously.
  - **Shore side electricity tackles local pollution (emissions, noise and vibration) and thus reduces the considerable nuisance of ships, especially the biggest ones with more than 1MVA power requirement, when they are berthed in close proximity to residential or commercial zones.**

- Financial:
  - Shore-side electricity is the most cost-attractive solution as regards retrofitting ships (500K€ to 1M€/vessel)
  - From a port perspective, shore-side electricity merely requires the extension of existing infrastructure, while LNG requires the creation of entirely new logistics and infrastructure.
  - Shore-side electricity does not require regular maintenance like scrubber technology that needs to change consumable materials (filters, chemicals…).
  - Shore-side technology allows engine maintenance during stay at the ports with an easy access to every spare part from onshore.

- Standardization

- A **global Standard ISO/IEC/IEEE 80005-1** has been validated since August 2012, enabling **a worldwide deployment**.

- Synergies with European Energy vision
  - Shore-side electricity aligns with the renewable energy policy adopted in the EU as it is the most efficient way to energize berthed vessels with renewable energy.
  - Power reception points from offshore wind farms are in most cases close to harbour areas, meaning minimum transport length.

In the light of the above, T&D Europe supports the Directive on the deployment of alternative fuels infrastructure in principle.

More specifically, T&D Europe supports the amendment to article 4.4 on shore-side electricity which was adopted by the Transport Committee of the European Parliament on 26 November 2013:

Article 4.4

Member States, in close cooperation with regional and local authorities, the managing bodies of the ports and the industry concerned, shall ensure that shore side electricity supply for waterborne vessels requiring more than 1 MVA is installed in berths of ports of the TEN-T Core Network located within 3 km of residential and commercial areas, by 31 December 2020. This requirement shall also apply to cruise and ferry terminals not included in the TEN-T Core Network, unless their managing bodies demonstrate lack of cost-effectiveness or absence of significant environmental benefits.

Furthermore, T&D Europe supports the article 4.5 as proposed by the European Commission:

Article 4.5

Shore-side electricity supply for maritime and inland waterway transport shall comply with the technical specifications set out Annex III.1.3 by 31 December 2015 at the latest.