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**Water and Sewage: Assessment on technical
and legal boundary conditions from the
perspective of BDEW**

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New EU “Broadband Deployment” Directive - Inclusion of wastewater

- **Directive 2014/61/EU of the European Parliament and of the Council of 15 May 2014 on measures to reduce the cost of deploying high-speed electronic communications networks**
- Network operators, within the meaning of Art. 2 No. 1 of the Directive are

Companies which operate a physical infrastructure to provide transport or distribution services for **wastewater and sewage**
- **The scope of application of the Directive includes treatment and disposal of wastewater and drainage systems**
- **Components of networks which are used for the supply of drinking water within the meaning of the EU Drinking Water Directive are excluded**

Position of Drinking Water Hygiene Commission of Germany

- ❖ The hygienic risks caused by laying such cables **inside** the drinking water supply networks, in the case of maintenance, network repairs and control and intensive mechanical or chemical cleaning and disinfection of network sections cannot be predicted.
- ❖ The crucial factors in estimating the risk are the importance of the protected commodity of drinking water hygiene generally and the requirements of the Drinking Water Ordinance specifically.
- ❖ A use of drinking water pipes for purposes not required from a drinking water hygiene perspective, are generally rejected by the Drinking Water Hygiene Commission **for hygienic reasons**.

Dangers for the public interest service water supply **BDEW: No risk!**

- EU-Drinking Water Directive (DWD) and German Drinking Water Ordinance not taken into account, **limit value: 0, minimum requirement, risk of contamination**
- No standardised European technical regulations for substances, materials and installation methods inside drinking water pipes
- From the water industry perspective, DIN EN 60793-3-60 does not fulfill the requirements, **unilateral action of DKE (electrotechnical industry)?**
- DVGW versus DKE: lack of participation of the DIN Water Standards Committee in drafting the standard, lack of assessment criteria, "status: in progress", requirements on hygiene insufficient
- DKE letter of 10/12/2013: electrotechnical **integrity of the cables** is ensured, **relevant standards for drinking water hygiene must also be observed?! Contradiction to Article 10 DWD**

Wastewater services in Germany

- Around 7,000 operators, 20,000 treatment plants, 560,000 km of sewers
- State provision
- Responsibility of the municipalities
- Coverage of wastewater connections and treatment in Germany meets highest EU standards
- Tertiary treatment nationwide
- Condition of sewers: Varies, damage categories

Wastewater

- Discharge into wastewater networks: **Households, businesses and industry**
- Wastewater very inhomogenous: Contains solid and liquid matter, no EU rules regarding restrictions on constituent substances
- Substances in wastewater varies greatly according to the specific conditions at the location
- Wastewater can contain substances which are corrosive as well as poisonous fumes harmful to the health of workers and damaging to cables

Wastewater disposal has priority

- Wastewater disposal is a "critical infrastructure"
- Laying and repairing cables can impede disposal
- In the case of disruption
 - Domestic wastewater systems: "without" retention
 - Domestic connections systems: No storage, collection or rerouting
 - Sewer networks: Additional wastewater rerouting/storage
- Consequence: Jeopardise protection of health, sanitary hygiene (epidemic related hygiene)

Indemnification of public wastewater disposal utilities

- From any adverse consequences (liability....) and associated costs of in-pipe installation of cables incurred by the public utility itself or its customers
- Also applies in respect of sewer rehabilitation and modernisation

Disposal of wastewater may not be impeded by cables laid inside in the pipes

- Cable industry must ensure that its installation techniques and the materials used do not adversely impact the sewers and the wastewater.
- General obligation to use best available technology.
- The cable industry bears the burden of demonstration and proof that its activities meet this requirement.
- What is required in sewers?
- Necessary maintenance and cleaning work
- In case of disruption: Unpleasant odours, corrosion of sewer
- Constituents of wastewater, corrosion of cables

Extreme natural events

- Heavy rainfall and flood events could dislodge cables laid inside sewers
- Consequences: Entanglement of floating waste, blockages, sewer damage
- **The cable installer is obligated to compensate for damage suffered.** Installer is obligated to restore normal conditions in the sewer and to bear all associated costs which arise.
- No access to sewer for cable repairs in the case of natural events.
- Due to dangerous gasses present, repairs only in consultation with the infrastructure operator and only by specialist personnel.
- **The costs for any additional safety measures must be borne by the cable operator.**

Certified and recognised technical processes are lacking

- Recognised technical regulations lacking in relation to standards for materials, substances and laying of cables.
- New in-pipe installation methods not generally technically proved audited /standardized in Germany or tested for use in practice .
- Public wastewater disposal utilities cannot be expected, on liability grounds, to bear the risks associated with cables being laid using technical methods which are as yet not generally accepted.
- Clarification is also needed on the permissibility of rejecting materials and substances from other EU member states.
- DIN EN 60794-40: DKE? No involvement of Sewage Committees DWA, requirements for use in practice?

Increased operating costs may not be passed on through wastewater fees

- The costs for using the sewers and domestic wastewater pipes for laying cables inside may not be shifted onto the general public.
- Approval and monitoring of in-pipe installation of cables must be undertaken by a permission of the water industry authorities
- Costs for additional monitoring and measures to protect the wastewater network must be borne by cable operator.
- Costs not taken into account in the EU cost study

Conclusion

- Status Quo: Compliance with requirements of wastewater operation not ensured
- Generally recognised technical rules lacking in relation to materials, substances and laying of cables inside pipes.
- Evaluation case by case, sewer condition, procedure required at cable installer's cost
- Permission of water authority
- Expert opinion where necessary
- Indemnification of public wastewater disposal utilities from any adverse consequences and associated costs of in-pipe installation

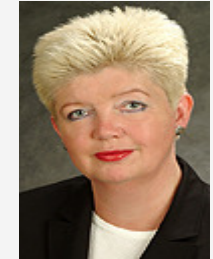
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Thank you for your attention!