

COPEX 2010

Pipelines & French regulation



**Stéphane NOEL – General
Directorate for Risk Prevention**

Ressources, territoires et habitats
Énergie et climat
Prévention des risques
Développement durable
Infrastructures, transports et mer

Présent
pour
l'avenir

Ministère de l'Écologie, de l'Énergie,
du Développement durable et de l'Aménagement du territoire

Plan

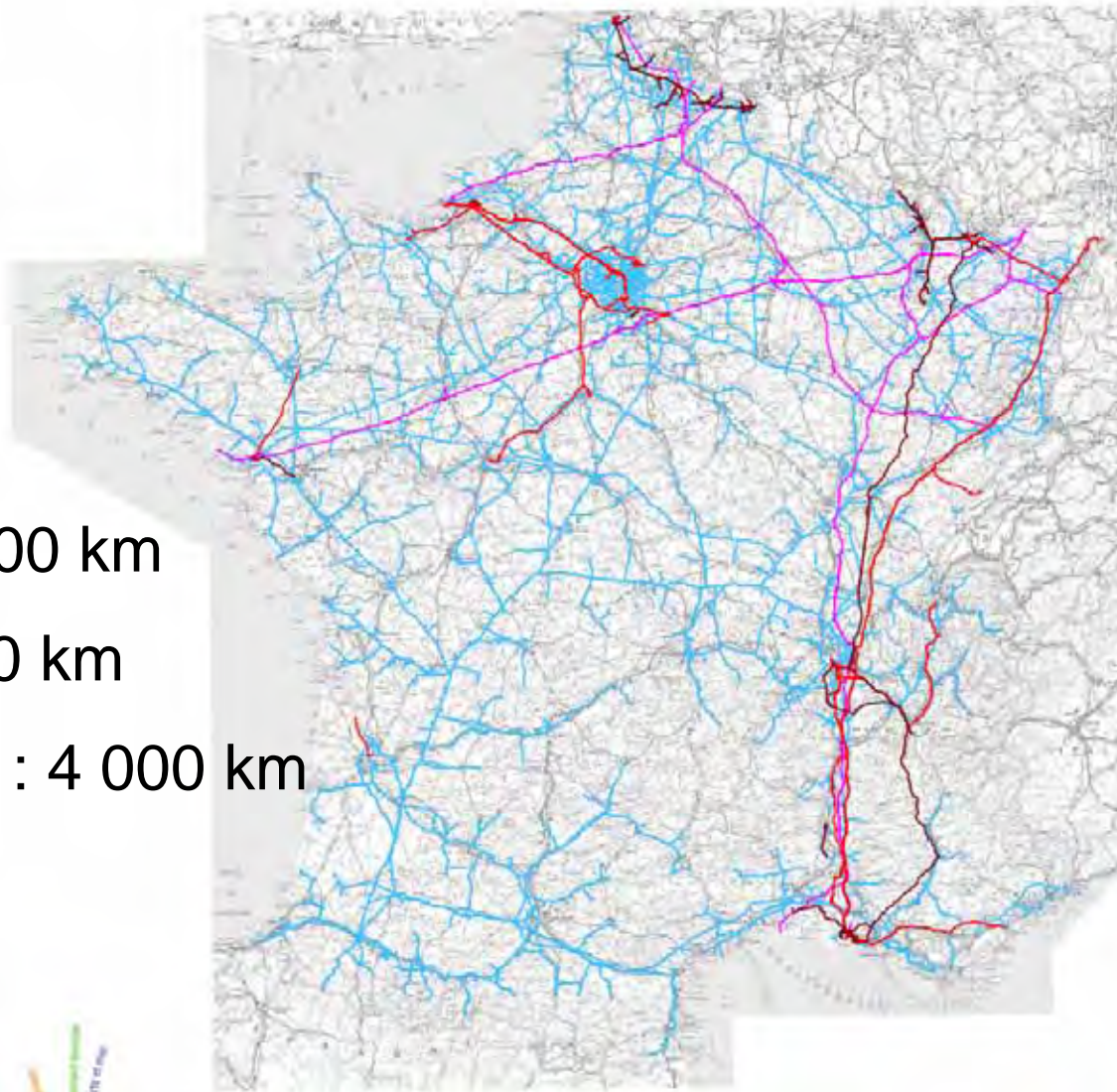
- Pipelines in France
- A new regulation in 2006
- An action plan to prevent ageing of pipelines
- An action plan to prevent damages to networks



Pipelines in France



CANALISATIONS DE TRANSPORT EN FRANCE : GAZ - HYDROCARBURES - PRODUITS CHIMIQUES



Gas : 36 000 km

Oil : 10 000 km

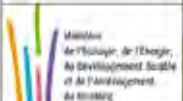
Chemicals : 4 000 km



Énergie, sécurité, santé, justice
 Énergie et climat
 Prévention des risques
 Infrastructures, transports et eau

Présent
pour
l'avenir

Légende :	Echelle :
Gaz	100 km
Hydrocarbures	1cm ↔ 35 km
Produits chimiques	
Pipeline de défense	



-
- The French government considers that pipeline is the best mode for the transport of dangerous goods.
 - Pipelines are surer than trucks, trains or boats. Pipelines generate few emissions of carbonic gas.
 - Security must always progress.



A new regulation in 2006



2006 : a new regulation...

- higher exigencies for the construction of pipelines ;
- to do risk assessments and to adapt security measures where risks are considered as not acceptable (in reference with an acceptability matrix);
- to do surveillance et maintenance plans ;
- to have plans to manage accidents;
- to take into account the density of population near the pipeline and to adapt the protection if necessary (e.g. laying concrete slabs above the pipe, by intensifying surveillance, by intensifying controls...)

...And a land planning strategy

- It is now forbidden to construct important building (i.e. >100 persons) in the area concerned by lethal effects ;
- In the area concerned by harmful damages, it is not acceptable to construct such buildings. But mitigation measures can be taken to reduce this area so as to permit the construction.
- The small constructions are always possible (e.g. houses). Every five years, the “pipeliner” must verify the risk assessment of the pipeline. If he notices an increase of the density of population, he must verify the acceptability of the situation (by using the matrix of acceptability). In case of unacceptability, he must reinforce the security of the pipeline (e.g. with protections –such as concrete slabs- to avoid damages by digging near the network).

An action plan to prevent ageing of pipelines



The ageing of pipelines : an important preoccupation

An action plans has been presented in January :



The ageing of pipelines : an important preoccupation

Why ?

Important corrosion of a pipeline located in a gallery (Oil)



Cracking of a pipeline (gas)



Leak of a pipeline (Oil)

Film SPSE



8 measures to prevent ageing

- Creation of a database to increase the learning of experience ;
- Taking into account environmental risk to evaluate the criticality of pipeline while preparing inspections plan, and elaboration of inspections plans by taking into account “risk based inspection” methods;
- Complete the justifications to demonstrate that controls permit to find harmful defaults in the tube;
- Launching a research program to develop the control methods ;

8 measures to prevent ageing

- Apply a security management system (which also takes into account the management of the contractors, the management of employees, of the quality... as it is applicable for SEVESO facilities);
- Develop a method pour conciliate the pipelines and natural classified territories (e.g. how to manage accidental damages ?);
- Develop independent expertises of the inspections plans;
- Inspections of the pipelines which are not perfectly circular (“roof effect” must be identified when a longitudinal weld exist on the tube).

An action plan to prevent damages to networks...



An action plan to prevent damages to networks...

If ageing of pipelines is an important preoccupation, the French government considers that the major risks are associated to the digging near pipelines.



An important accident in dec. 2009



Excavator

An action plan to prevent damages to networks...

This Action plan reposes on 4 pillars:

- The creation of an “pluralist structure” (learning of experience, make all of the stakeholders concerned aware of this risks);
- The development of a specific learning for the main actors of public work;
- The creation of a database (website) which will include the informations necessary to permit the protection of **all** the networks;
- The modification of the regulation.

An action plan to prevent damages to networks...

The modification of the regulation includes :

- a clarification of the responsibilities of all the stakeholders concerned by a project of work ;
- the necessity to identify the networks before digging;
- the necessity to upgrade the quality of the plans done after the construction of a new network;
- the obligation, for the enterprises who dig, to stop the work if the situation in the ground is different of the situation she knows by the plans (and/or by a localization before the beginning of the job) ;

An action plan to prevent damages to networks...

The modification of the regulation includes :

- the obligation, for the responsible of the project, to assume the delays and the costs if the work stop;
- the necessity to adapt the techniques of work near the networks (each technique will have some limitations / restrictions of use);
- the obligation, for the network operators, to examine before the beginning of the digging operations, how to manage an accident (which valves should be shut down, how to preserve this valves during the construction...).



Présent
pour
l'avenir

