

THE FRENCH REGULATION ON DISMANTLEMENT (ONSHORE WIND POWER PROJECTS)

DISMANTLING OF WIND POWER PLANTS IN FRANCE AND IN GERMANY

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MINISTÈRE
DE LA TRANSITION
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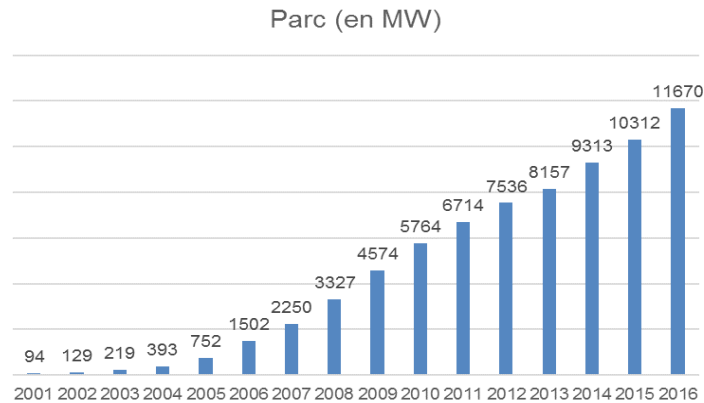
WIND POWER DISMANTLEMENT IN FRANCE

DEVELOPMENT OF WIND POWER PLANTS IN FRANCE

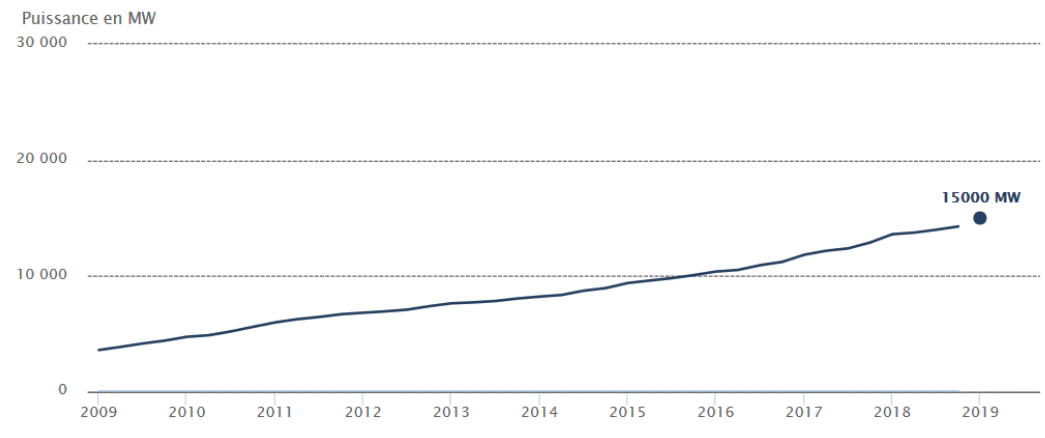
HUGE INCREASE OF THE PLANT TO BE DISMANTLED WITHIN THE NEXT YEAR :

- 1st wind turbines : ~ 2000 - End of 2017 : 7 200 wind turbines connected to the grid
- Span life : 15 – 20 years > 1st repowering are being operated

GRID CONNECTION (2001 - 2016)



Évolution du parc éolien



EVOLUTION OF THE WIND FARMS THAT NEED TO BE DISMANTLED (CUMULATED GW)

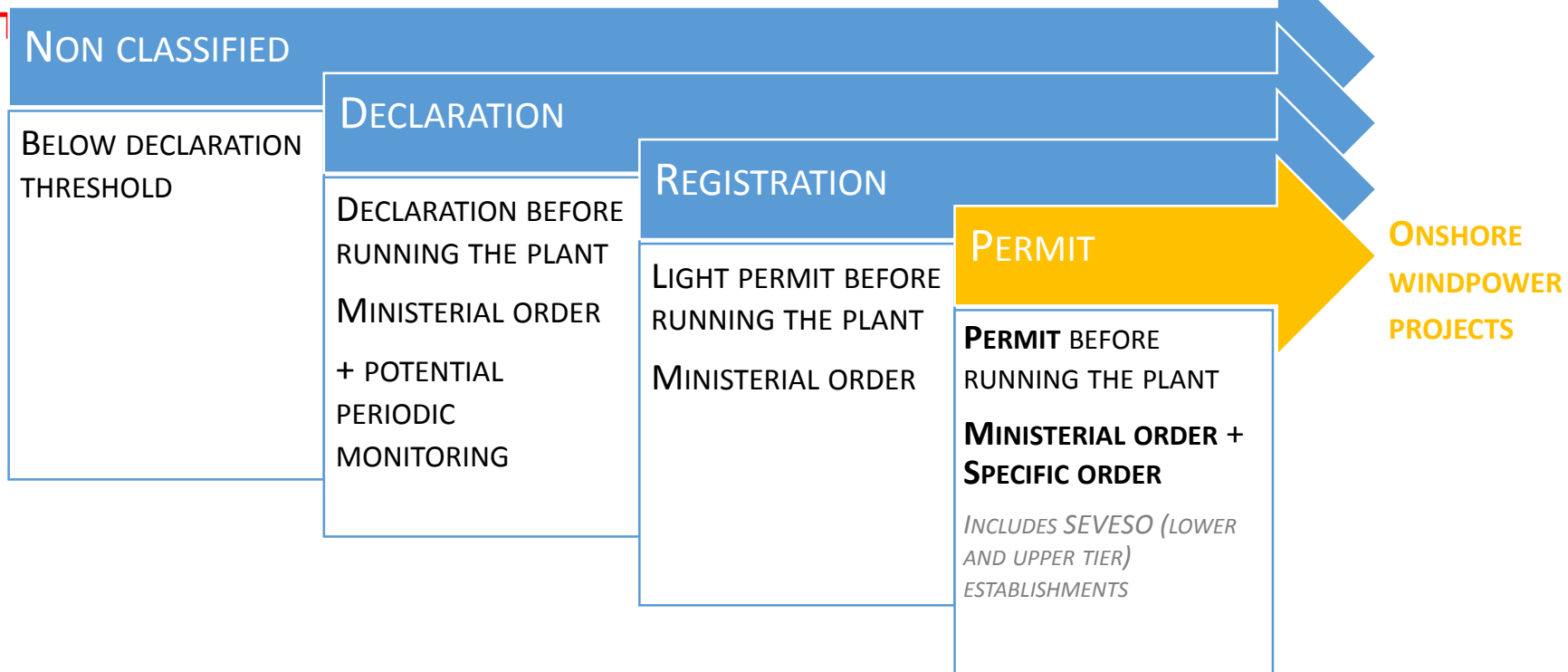


Etude sur la filière éolienne Française, ADEME (2017)

FRENCH REGULATION

GENERAL REGULATION FOR ONSHORE WIND POWER PLANTS

- **FRENCH REGULATION FOR INDUSTRIAL PLANTS BASED ON :**
 - **DIRECTIVE 2012/18/UE (SEVESO III) : MAJOR ACCIDENT HAZARDS**
 - **DIRECTIVE 2010/75/UE ON INDUSTRIAL EMISSIONS (IED)**
- **FRENCH SPECIFIC NOMENCLATURE FOR CLASSIFIED INSTALLATION FOR ENVIRONMENT PROTECTION**



FRENCH REGULATION

GENERAL REGULATION FOR ONSHORE WIND POWER PLANTS

■ MINISTERIAL ORDERS

■ ORDER FOR AUTHORIZED ONSHORE WIND POWER PLANTS

Arrêté du 26 août 2011 relatif aux installations de production d'électricité utilisant l'énergie mécanique du vent au sein d'une installation soumise à autorisation au titre de la rubrique 2980 de la législation des installations classées pour la protection de l'environnement

■ ORDER FOR DECLARED ONSHORE WIND POWER PLANTS

Arrêté du 26 août 2011 relatif aux installations de production d'électricité utilisant l'énergie mécanique du vent au sein d'une installation soumise à déclaration au titre de la rubrique 2980 de la législation des installations classées pour la protection de l'environnement

■ ORDER FOR DISMANTLEMENT, LAND RESTORATION AND FINANCIAL WARRANTIES

Arrêté du 26 août 2011 relatif à la remise en état et à la constitution des garanties financières pour les installations de production d'électricité utilisant l'énergie mécanique du vent

■ SPECIFIC PREFECTORAL DECREE

■ DECISION TO AUTHORIZE THE OPERATION OF THE FARM

■ SPECIFIC PRESCRIPTIONS THAT CAN BE MORE STRINGENT THAN THE MINISTERIAL ORDERS :

- Dismantlement conditions are decided during the project instruction phase : they are known by the operator before the beginning of the plant operation.
- Dismantlement prescriptions are written in the specific order signed by the Prefect.



FRENCH REGULATION

REGULATION FOR DISMANTLEMENT

■ ENVIRONMENTAL LAW

■ ARTICLE L. 515-46 OF THE ENVIRONMENT CODE :

- Wind farm **operators are responsible** for the dismantlement and the land restoration of the wind farms **as soon as** the plant operation is handover
- Need to set financial warranties
 - Only in case of operator's failure to dismantle the plant

■ ARTICLE R. 515-106 OF THE ENVIRONMENT CODE

- Defines the **scope of intervention** :
 - Dismantling of production facilities
 - Excavation of foundations
 - Land restoration
 - Waste treatment (recycling, reuse ...)

■ ARTICLE R. 515-107 OF THE ENVIRONMENT CODE

- Procedure in case of **operator's failure for dismantling** (use of financial warranties mentioned at the L. 515-46)



FRENCH REGULATION

REGULATION FOR DISMANTLEMENT

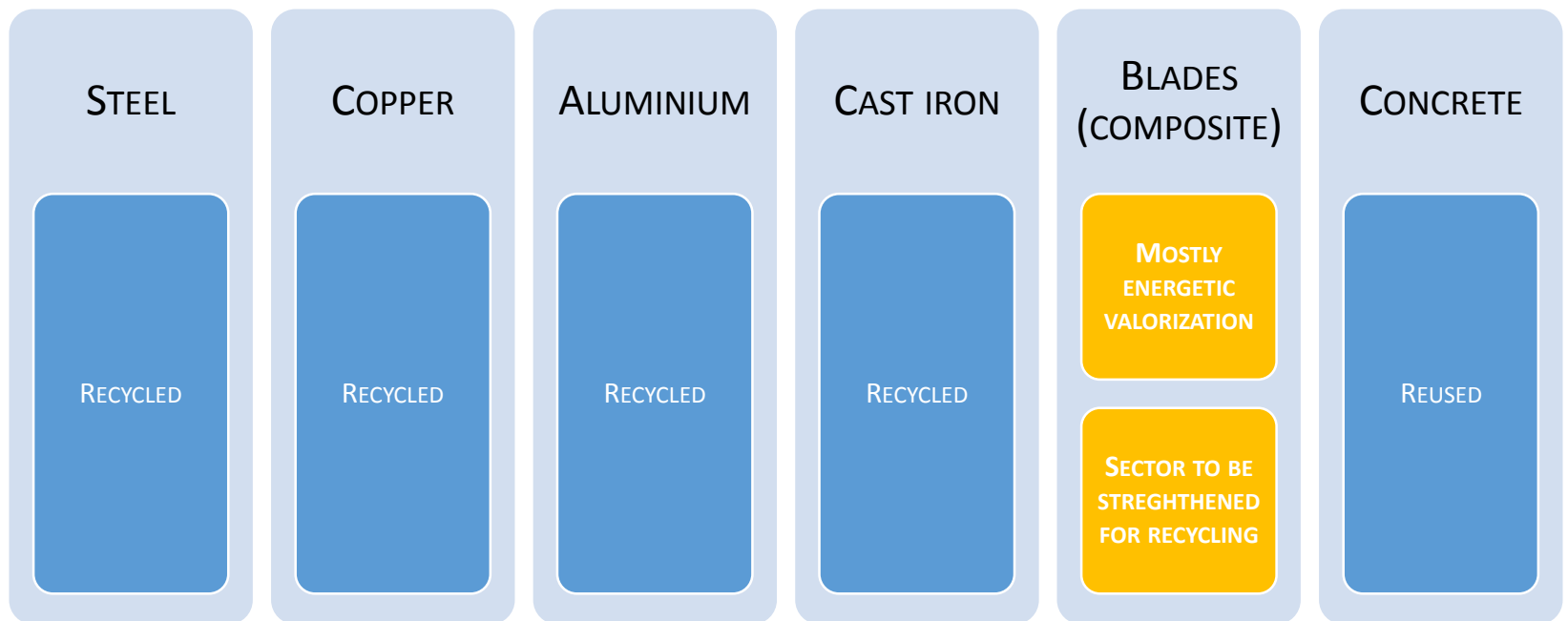
- **MINISTERIAL ORDERS FOR DISMANTLEMENT, LAND RESTORATION AND FINANCIAL WARRANTIES**
 - **COMPLETE DISMANTLEMENT OF :**
 - wind turbines
 - cables (within a 10 m radius)
 - **PARTIAL EXCAVATION OF THE FOUNDATION, DEPTH ACCORDING TO THE LAND USE :**
 - 30 cm (rocky ground and no agricultural use)
 - 2 m (forestry area)
 - 1 m (other usage : agricultural use ...)
 - All cases : addition of a soil with similar properties than the local one
 - **LAND RESTORATION :**
 - Paths for cranes, access road (except if the land owner prefers keeping the land as it is) ...
 - **FINANCIAL WARRANTIES :**
 - **50 k€/turbine** (with annual actualization rate)
 - This is a minimum amount set in the ministerial order. A specific prefectural decree might be more stringent and define a higher amount of warranties.

COMING CHALLENGE

■ STRENGTHENING THE RECYCLING INDUSTRY

■ OBJECTIVE OF THE FRENCH MULTI ANNUAL ENERGY PLAN (2019-2023 | 2024-2028) :

- Mandate by 2023 the recycling of the constituent materials of wind turbines during their dismantling



- MISSION TO THE FRENCH GOVERNMENT TO IDENTIFY SHORT / MID-TERMS ACTIONS TO DEVELOP THE LOCAL RECYCLING INDUSTRY RELATED TO WIND TURBINE DISMANTLEMENT

THANKS FOR YOUR ATTENTION



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