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The role and challenges of the 21st century power system

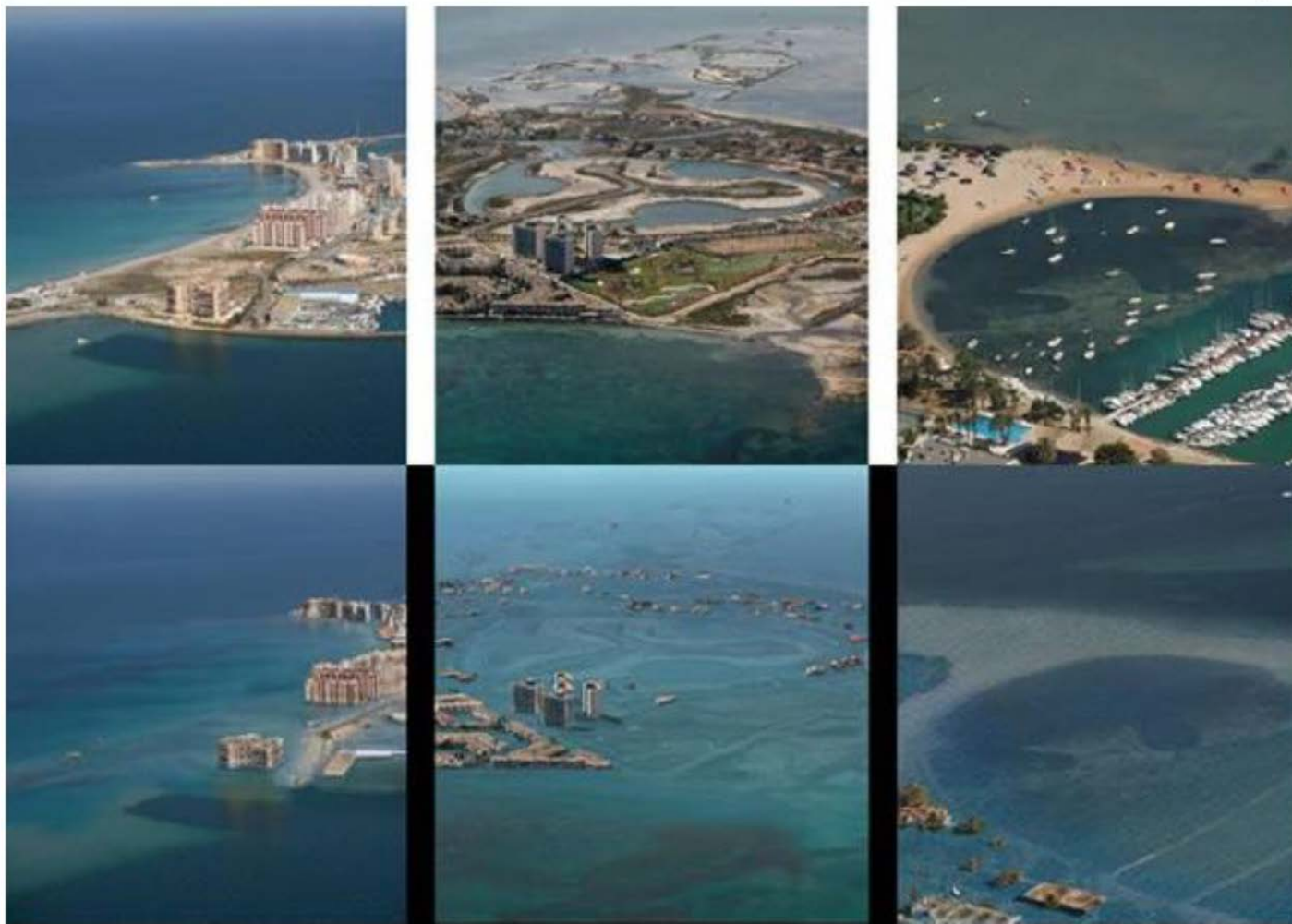
Vicente J. Gonzalez-Lopez

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17 May 2017



Can you find the differences?



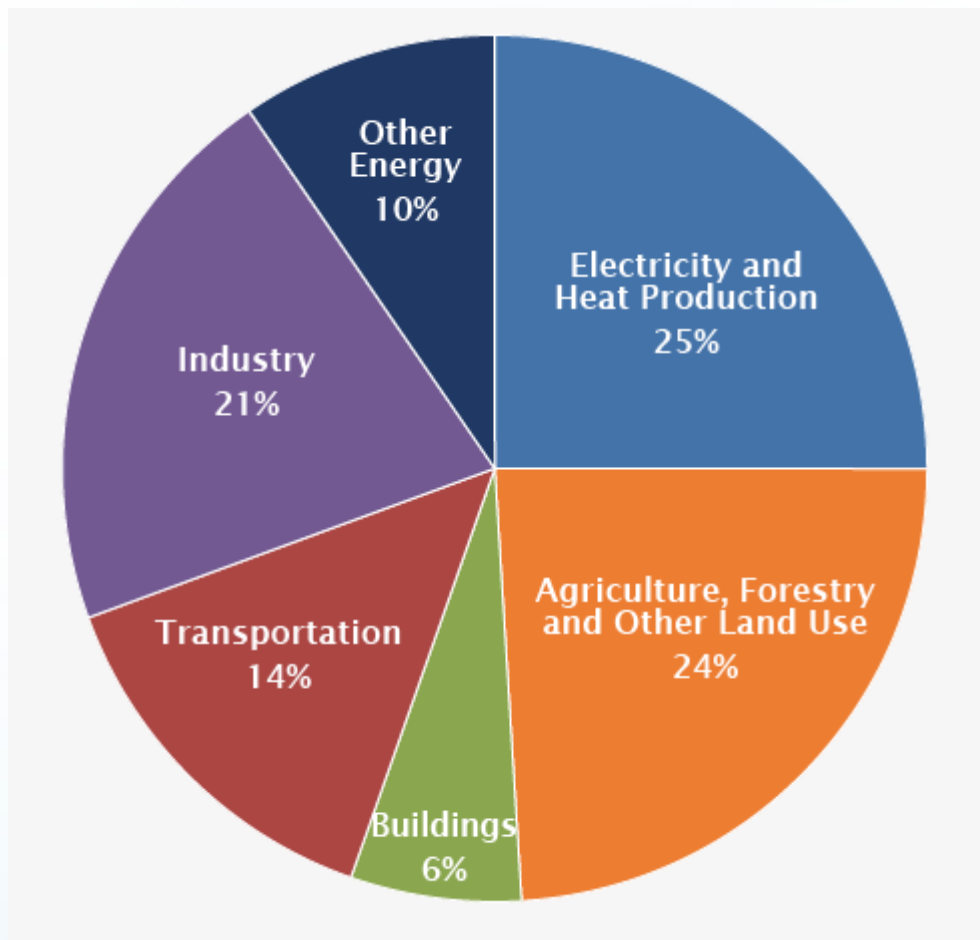
And here?



The global challenge



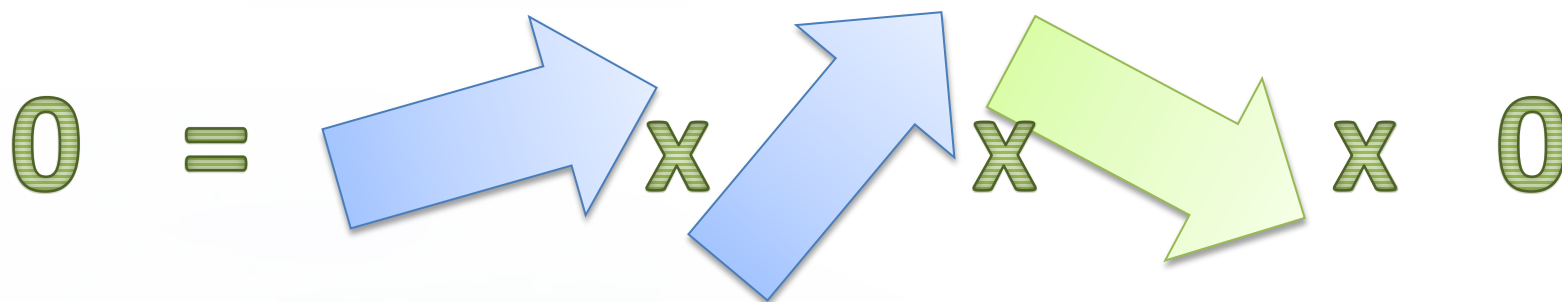
The global challenge



The global challenge



Total GHG emissions	Total population	Products / services	Total energy used	Associated GHG emissions
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The role and challenges of the power sector

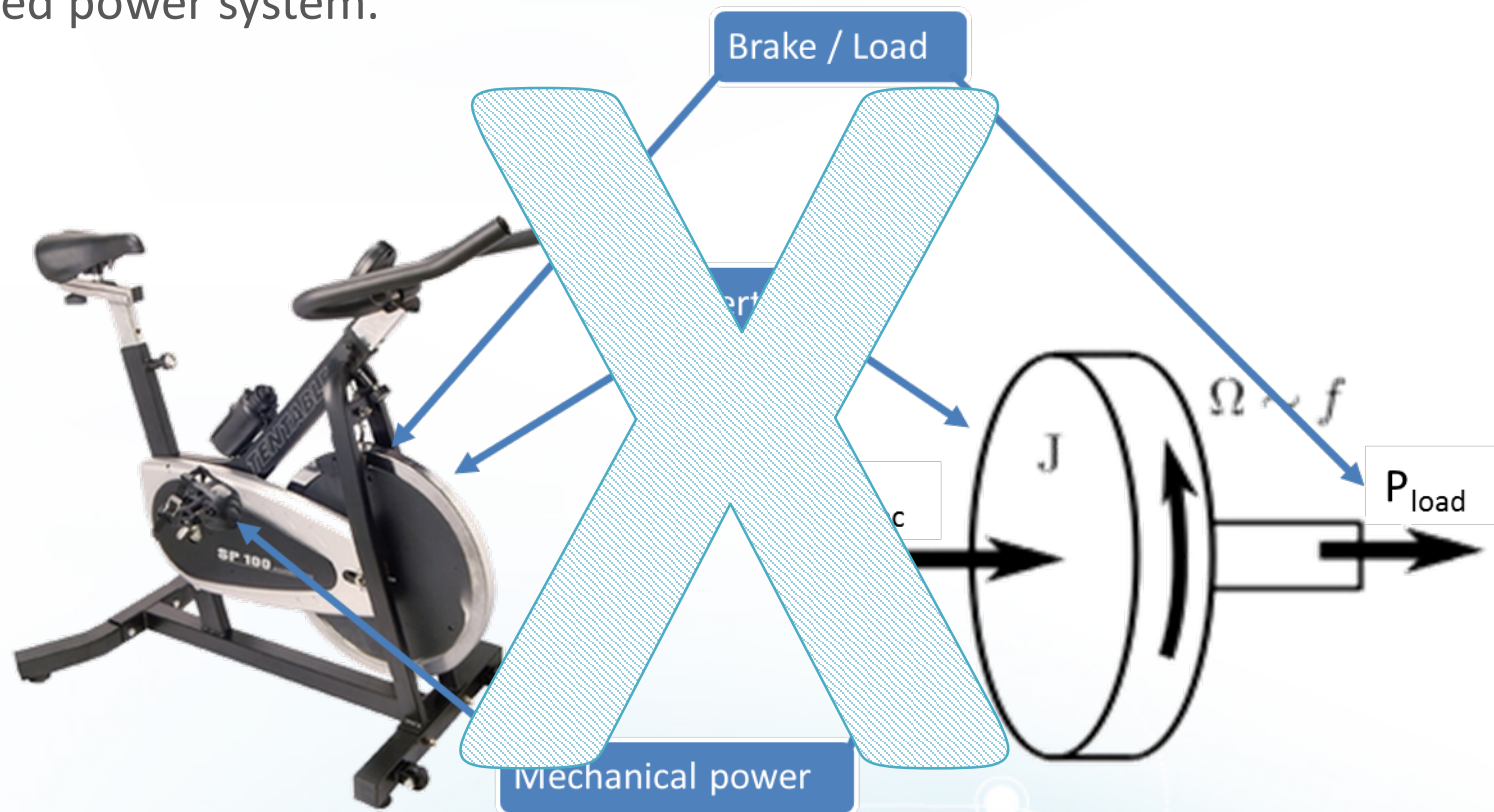


- Electrifying the building, transport sector, industry and other energy sector
- Decarbonising the power system.
 - Through a 100% renewable generation
- Setting up new basic principles.
 - From a power system based on synchronous generation to a one based on power electronics.
 - Today's grid, grid codes, protection and control systems are not designed for the new paradigm.



The role and challenges of the power sector

- Keeping present levels of reliability and security of supply in an inverted based power system.





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Gracias por su atención