



MATRYCS

Large scale pilot at
regional level:

“LSP9-Energy Performance
Certificates (EPCs)”

Modular Big Data Applications
for Holistic Energy Services in
Buildings

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- Who We Are
- LSP9: Regional Energy Performance Certificates
- Key data to be used
- Current status and needs
- Matrycs solutions
- Expected impacts

- EREN, regional energy agency of Castilla y León region (94,200 km², 2.4 million inhabitants).
- Main objectives: promotion of energy efficiency and renewable energies in the region.
- EREN is in charge of the definition and management of regional strategies such as energy efficiency or bioenergy.

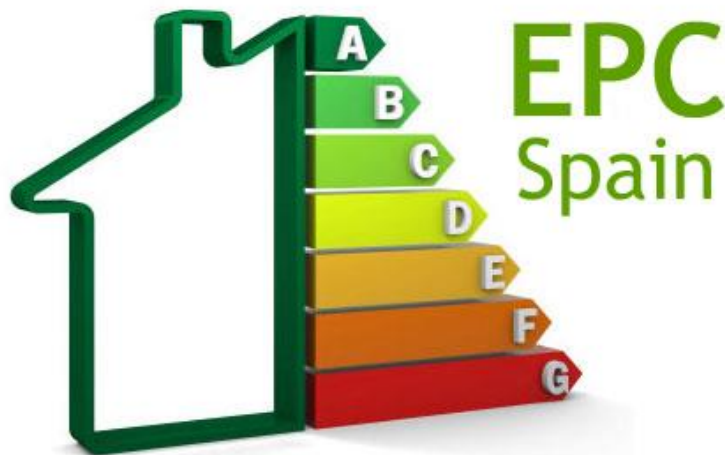


Source: <https://invertirencastillayleon.com/>



Source: http://euromech.com.tr/en/leed_greenbuilding/

- EREN runs the regional EPCs registry (in Spain EPCS registries are regionalized).
- It currently has about 160,000 EPCs (18,000 new registrations per year).
- The registration procedure is done through an xml file generated by the calculation programs approved by the central government.



Source: <https://www.epc-spain.com/>

Key data to be used

xml files

```
Archivo  Editar  Buscar  Vista  Codificación  Lenguaje  Configuración  Macro  Ejecutar  Plugins  Ventana  ?
ARCHIVO DE CALCULO.xml  190226_peral 21_5403.xml
1      <?xml version="1.0" encoding="UTF-8" ?>
2      <DatosEnergeticosDelEdificio version="2.0">
3          <DatosDelCertificador>
18         <IdentificacionEdificio>
33         <DatosGeneralesyGeometria>
58         <DatosEnvolventeTermica>
59             <PuentesTermicos>
117            <CerramientosOpacos>
757            <HuecosyLucernarios>
849        </DatosEnvolventeTermica>
850        <InstalacionesTermicas>
851            <GeneradoresDeCalefaccion>
871            <GeneradoresDeRefrigeracion>
900            <InstalacionesACS>
911        </InstalacionesTermicas>
912        <InstalacionesIluminacion>
936        <CondicionesFuncionamientoyOcupacion>
956        <Demanda>
968        <Consumo>
1021       <EmisionesCO2>
1031       <Calificacion>
1081       <PruebasComprobacionesInspecciones>
1089       <EnergiasRenovables>
1105       <DatosPersonalizados>
1117      </DatosEnergeticosDelEdificio>
1118
```

- EPCs need to be more reliable, with more accurate energy savings calculations on which renovation investment decisions can be based.
- EPCs need to provide better and more tailored information to end-users (non-expert).
- Improve quality controls at both users and administration level.
- EPCs need to become a more dynamic tool based on databases that provide clear information on the energy characteristics of buildings.
- EPCs need to improve public awareness and confidence.



Sources: <https://thehungryjpeg.com/> & <https://www.energoinfo.com/listing/ukraine-adopts-energy-performance-of-buildings-and-metering-laws/>

MATRYCS solutions

1. Support data share and harmonization.
2. Facilitate compliance and checking.
3. De-risking investments analyzing refurbishments proposals.

Expected outcomes

- EPC checker for architects and engineers
- EPC verification system for Administrations
- Georeferenced EPC *pre-qualification* tool
- Datasets of best refurbishment measures from EPCs and analytics
- ECM-based scenario tool: accurate and reliable proposal reports
- Digital building twin for better EPC calculations
- Regional building energy consumption calculator for public policies
- Energy Efficiency Strategies, prioritizing areas of action.



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Thank you!

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