



Module 3: Data Collection



How to make data collection manageable – Some experiences from Asturias Asturias (FAEN)

Cesar Valmaseda



Co-funded by the European Union under project ID101076088. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them.

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Main Activities

Information & Guidance on Energy *from Public Administration to Companies and citizens*



Communication & Dissemination, Training and Awareness Raising



CONSORCIO TECNOLÓGICO
de la energía de asturias

Energy Advisors and Support to Policy Makers & Public Authorities *(Regional Government, Councils and Municipalities)*

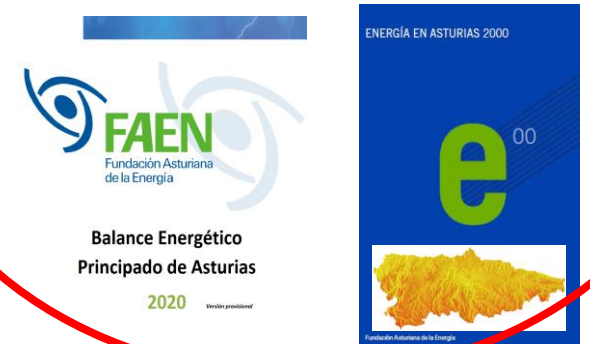


Research and Innovation & Territorial Cooperation *EU Funding Programmes*



REGIO1ST

Regional Energy Assessment, Analysis and Reports



Technical & Economic Support *SMEs & StartUp*



Data collection, analysis, cooking, distilling, assessment and reporting

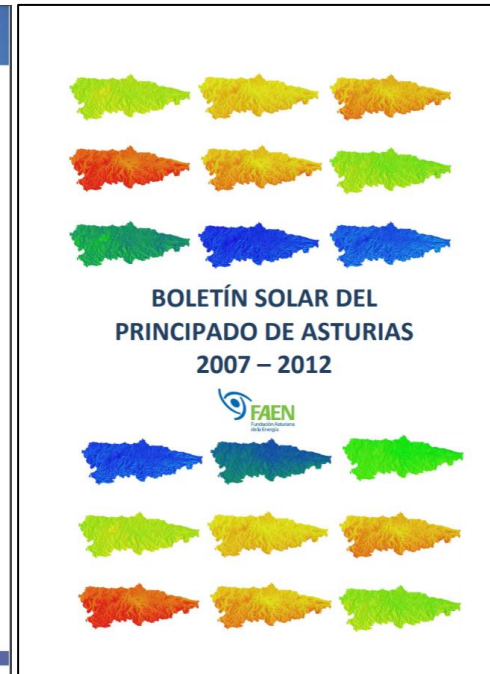
Energy Report of Asturias Principality



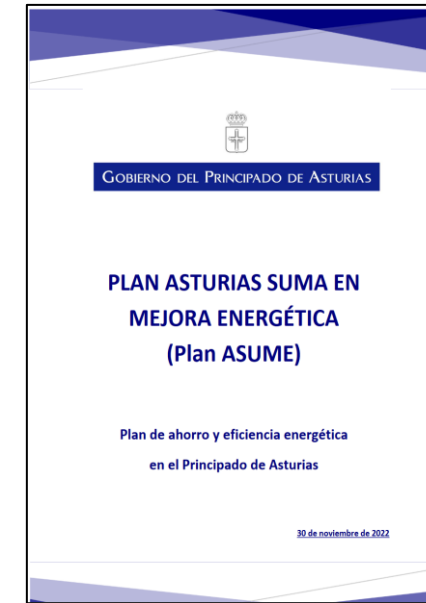
Electric Report of Asturias Principality



Solar Report of Asturias Principality



Other Reports



Regional Energy System - Report

Goals

1

Collection of energy data from the Asturias region each year.

2

Analysis of information of energy production, consumption as per sectors, and energy sources

3

Detailed compilation and representation of electricity production data.



**Transición
Energética**

Menos huella
Más planeta

Network and methodology

1

Identification of assessment and reporting objectives

2

Selection of “data-providers” entities

3

Creation of surveys (primarily in word format)

4

Sending surveys to entities via email

5

Compilation of data (sending periodic reminders)

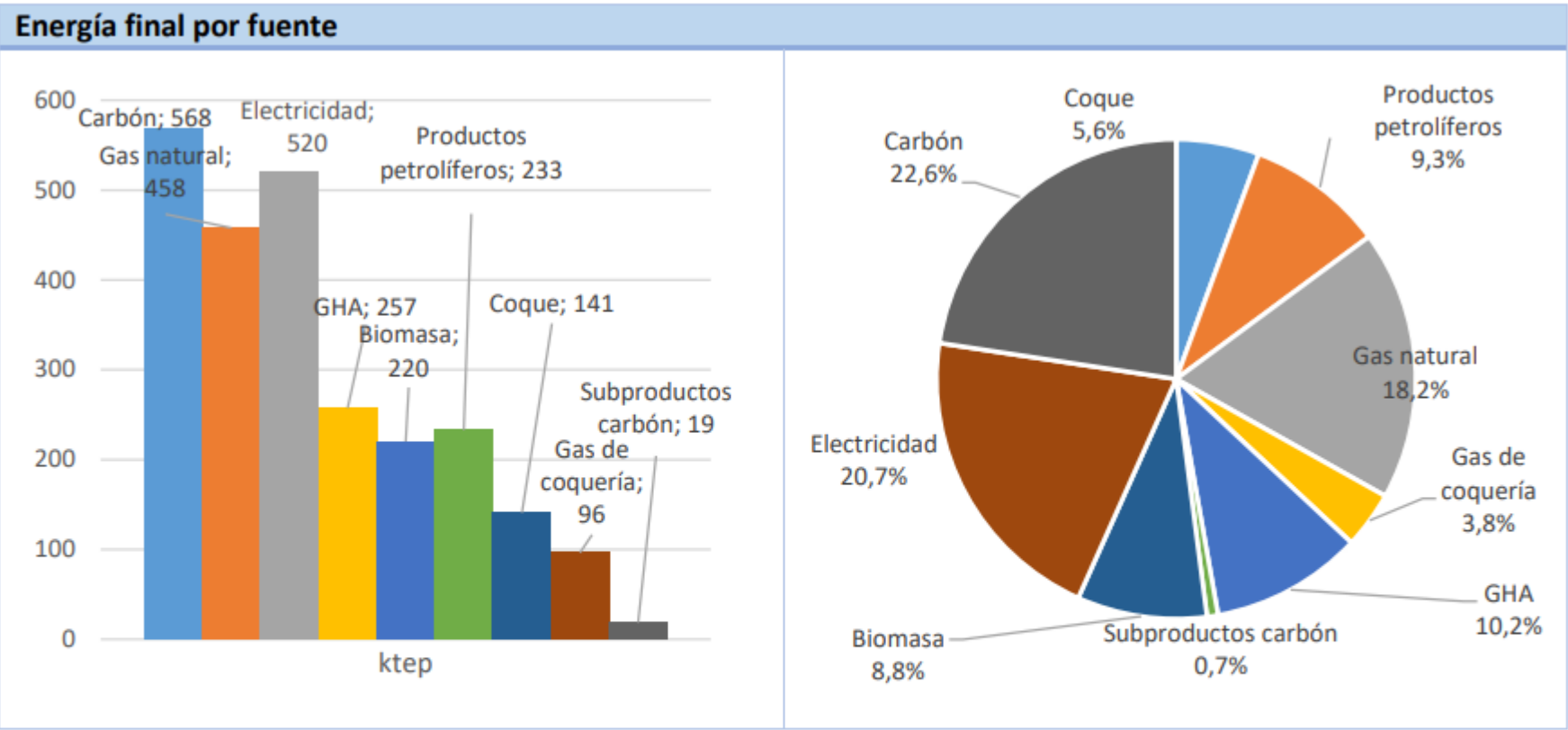
6

Evaluation of received data using internal software

7

Process thinking & proposal of improvements 4 next study





Asturias (ktep)	Coque	Prod. Petrol.	Gas natural	Gas de coquería	GHA	Subp. carbón	Biomasa	Electricidad	Carbón	Total
2021	141	233	458	96	257	19	220	520	568	2.512
2020	65	132	490	48	89	8	212	477	394	1.915
Variación	+118,3%	+76,5%	-6,5%	+100,3%	+188,7%	+142,4%	+3,9%	+9,0%	+43,9%	+31,2%

Electricity Report of Asturias

Goals

1

Collection of electricity production info from the Asturias region yearly (per quarters).

2

Data classification by type and nature of the electricity production sources.

3

Tracking key data in the energy sector: self-sufficiency, CO2 emissions, system efficiency,...



**Transición
Energética**

Menos huella
Más planeta

Network and methodology

1

Selection of clear study objectives

2

Selection of data-providers => administration departments

3

Creation of surveys (primarily in word format)

4

Sending surveys to the administration via email

5

Compilation of data (sending periodic reminders)

6

Evaluation of received data using internal software

7

Suggestions and Proposal of improvements for the next study



Solar Report of Asturias

Goals

1

Continuous collection of solar radiation data in the Asturias region.

2

Identification and zoning based on level of solar radiation .

3

Identification and location of shaded areas.



**Transición
Energética**

Menos huella
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Network and methodology

1

Deployment of 13 continuous data measurement stations with specific equipment distributed throughout the Asturias region

2

Currently, data download occurs periodically by physically travelling to the stations every 3 months

3

Compilation, evaluation and study of the collected data

4

Continuous maintenance of equipment for proper functioning

5

Ongoing renewal of equipment due to obsolescence

6

Implementation of continuous improvements for the establishment of complete remote management

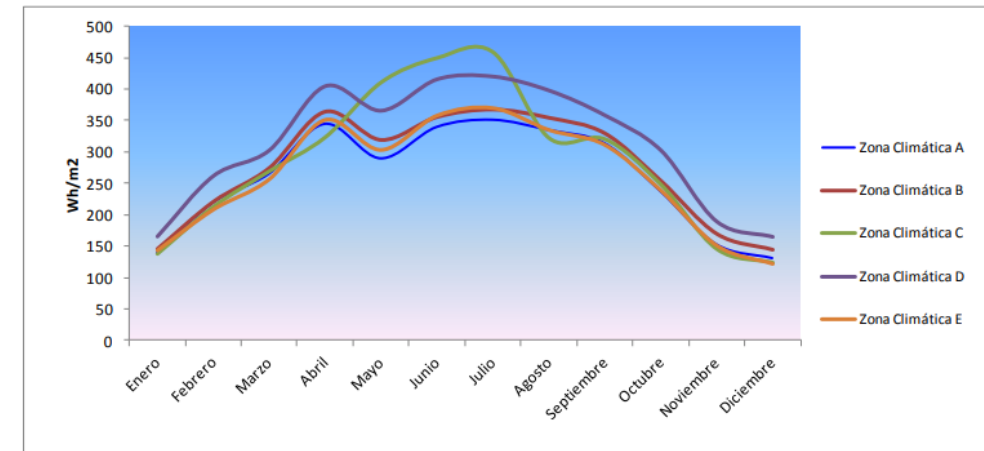
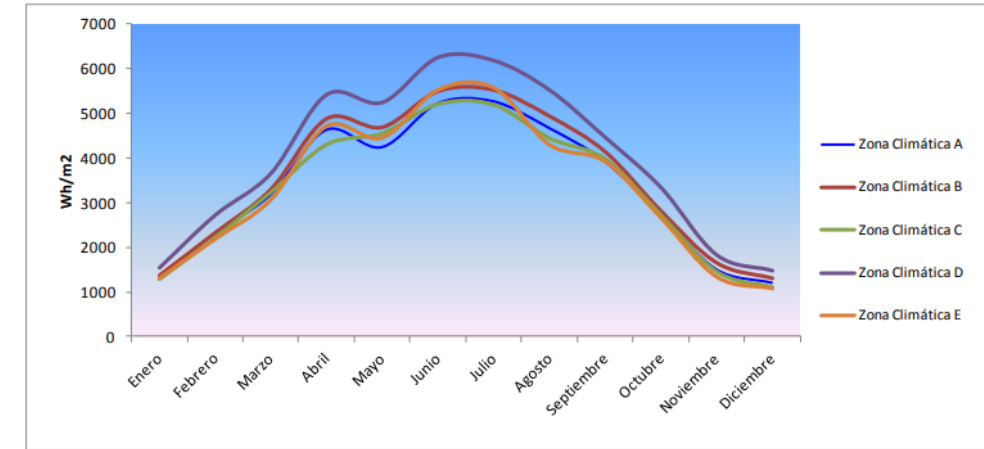


Equipment



Results

Inclinación	Enero	Febrero	Marzo	Abril	Mayo	Junio	Julio	Agosto	Septiembre	Octubre	Noviembre	Diciembre	Anual
0°	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
5°	1,09	1,07	1,04	1,02	1,00	1,00	1,00	1,01	1,04	1,06	1,09	1,10	1,04
10°	1,18	1,14	1,08	1,03	1,00	0,99	1,00	1,02	1,06	1,12	1,17	1,20	1,08
15°	1,26	1,20	1,12	1,04	1,00	0,98	0,99	1,02	1,09	1,16	1,24	1,29	1,12
20°	1,34	1,25	1,14	1,04	0,99	0,97	0,98	1,02	1,11	1,21	1,31	1,37	1,14
25°	1,40	1,30	1,16	1,04	0,98	0,95	0,97	1,02	1,12	1,24	1,37	1,45	1,17
30°	1,46	1,34	1,18	1,03	0,96	0,93	0,95	1,00	1,13	1,27	1,42	1,51	1,18
35°	1,51	1,37	1,19	1,02	0,94	0,91	0,92	0,99	1,13	1,30	1,47	1,57	1,19
40°	1,55	1,39	1,19	1,01	0,91	0,88	0,89	0,97	1,12	1,31	1,51	1,62	1,20
45°	1,59	1,41	1,18	0,98	0,88	0,85	0,86	0,94	1,11	1,32	1,53	1,66	1,19
50°	1,61	1,42	1,17	0,96	0,85	0,81	0,83	0,91	1,09	1,32	1,55	1,69	1,19
55°	1,63	1,42	1,16	0,93	0,81	0,78	0,79	0,88	1,07	1,32	1,57	1,71	1,17
60°	1,63	1,41	1,13	0,89	0,77	0,74	0,75	0,84	1,04	1,30	1,57	1,72	1,15
65°	1,63	1,39	1,10	0,85	0,73	0,69	0,71	0,80	1,01	1,28	1,56	1,72	1,12
70°	1,61	1,37	1,07	0,81	0,69	0,65	0,66	0,75	0,97	1,25	1,54	1,71	1,09
75°	1,59	1,34	1,03	0,76	0,64	0,60	0,62	0,71	0,92	1,22	1,52	1,69	1,05
80°	1,56	1,30	0,98	0,71	0,59	0,55	0,57	0,66	0,87	1,18	1,48	1,66	1,01
85°	1,52	1,25	0,93	0,66	0,54	0,51	0,52	0,61	0,82	1,13	1,44	1,62	0,96
90°	1,47	1,20	0,87	0,61	0,49	0,46	0,47	0,55	0,76	1,08	1,39	1,57	0,91



Just Transition Observatory of Asturias

Goals

1

Ideated to address the Energy transition from a socially just and sustainable perspective in the Asturias Region.

2

Tool for citizen participation and dissemination of the Just Transition process.

3

JT Monitoring and assessment, also the energy and climate strategy.

4

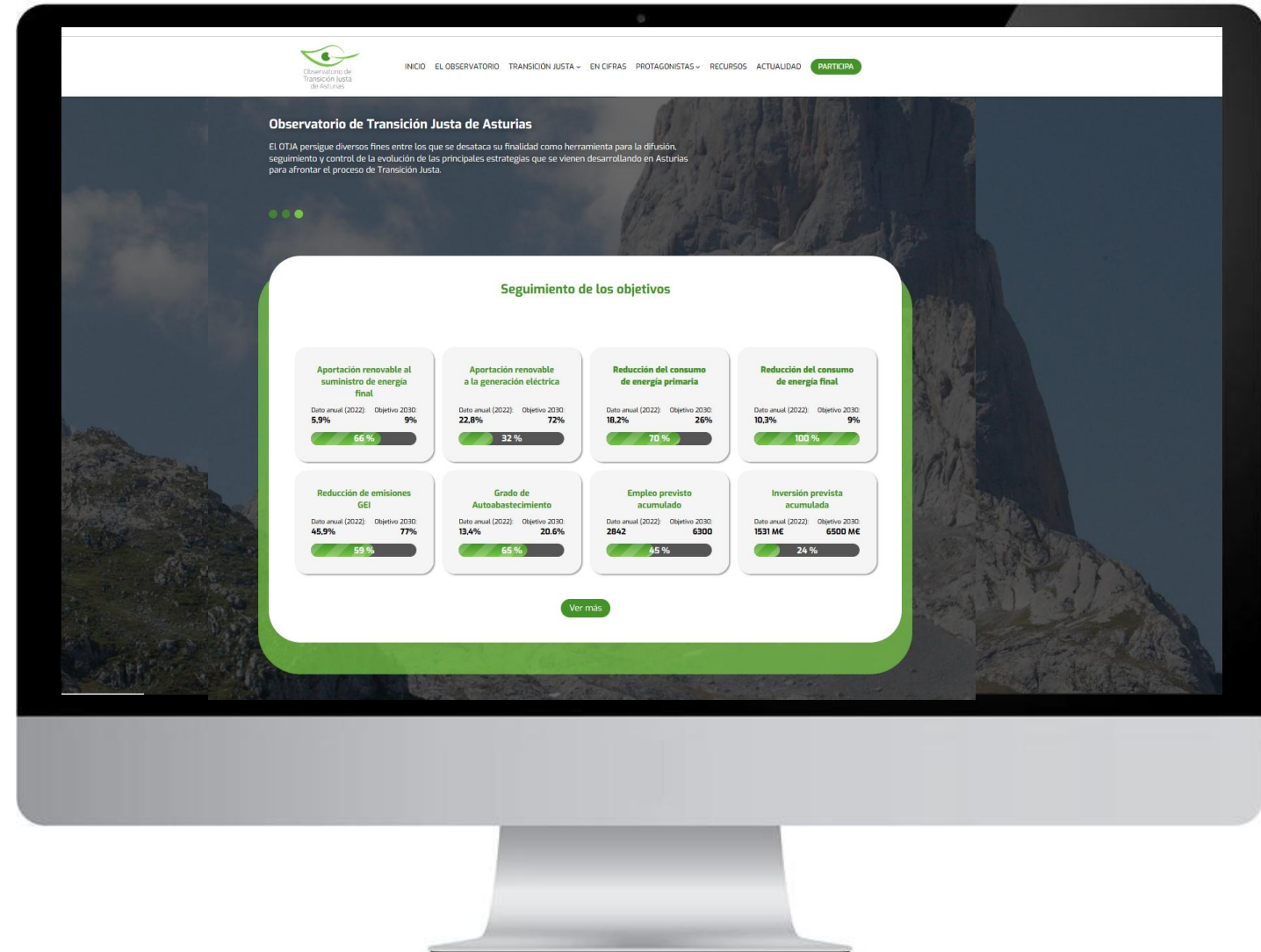
Evaluate the degree of execution and fulfillment of actions from regional strategies.



**Transición
Energética**

Menos huella
Más planeta

Network and methodology



Network and methodology

1

Selection of clear and strategic indicators (KPIs)

2

Selection of data providers public departments and private entities

3

Creation of surveys (primarily in excel format)

4

Sending surveys to entities via email (every 6 months)

5

Compilation of data (sending periodic reminders)

6

Recover data divided by sectors and nature (Raw material, Energy, Just Transition, Climate data...)

7

Evaluation of received data using internal tools (energy models)



Observatorio de
Transición Justa
de Asturias

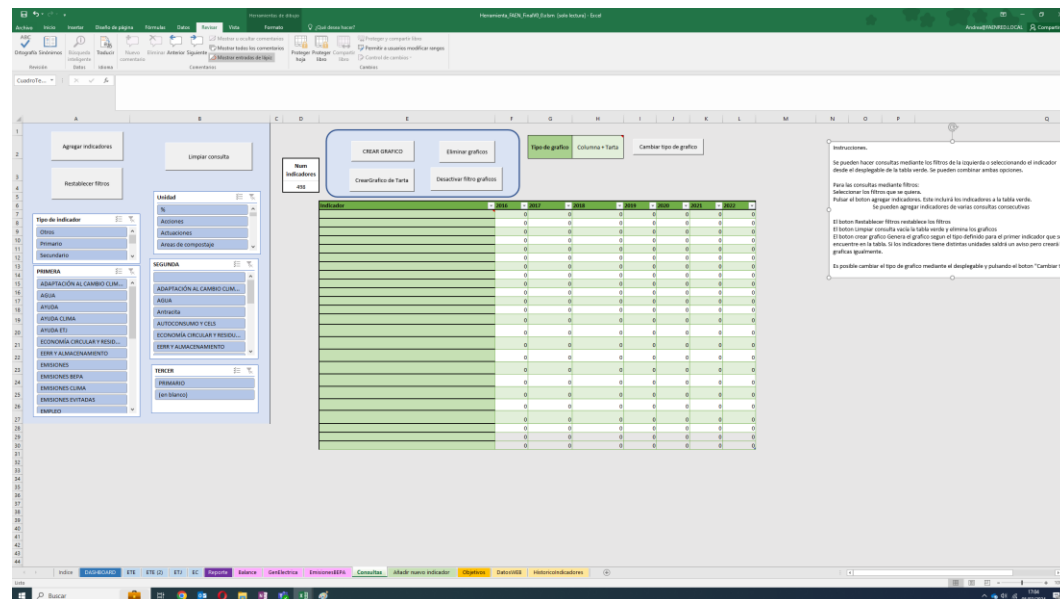
The logo for REGIO1ST features the word "REGIO" in a dark blue, sans-serif font, followed by a stylized map of the region of Friesland. The map is a light blue outline showing the coastline and internal boundaries. A yellow lightbulb with a black outline is positioned in the center of the map, symbolizing innovation or a central idea. To the right of the map is the word "1ST" in a teal, sans-serif font.

2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
15.705.057,00	18.481.311,00	17.070.197,00	17.116.243,00	18.467.507,00	15.479.751,00	17.539.593,00	11.569.641,00	9.616.666,00	7.485.531,00	9.931.899,00	11.984.411,00	9.967.720,00	9.905.292,00	14.146.935,00	8.957.013,00	11.968.471,00	9.109.313,00	6.436.750,70	6.030.207,83	7.680.757,00
12.318.393,00	14.733.028,00	13.386.593,00	13.579.484,00	14.733.969,00	12.256.809,00	13.517.794,00	7.878.558,00	7.003.094,00	5.287.589,00	6.427.595,00	9.110.877,00	8.325.765,00	8.328.328,00	11.574.333,00	6.818.077,00	9.660.713,00	7.737.626,04	3.540.986,00	2.914.308,83	4.648.525,00
3.386.664,00	3.748.283,00	3.683.604,00	3.536.759,00	3.305.908,00	2.808.172,00	3.593.258,00	2.452.506,00	825.857,00	1.010,00	1.359.316,00	1.725.492,00	898.499,00	916.042,00	1.839.491,00	1.388.104,00	1.242.861,00	374.376,96	335.228,70	194.674,00	0,00
0,00	0,00	0,00	0,00	427.630,00	414.770,00	428.541,00	428.272,00	402.208,00	417.815,00	327.836,00	345.569,00	426.601,00	349.972,00	352.830,00	376.662,00	354.799,00	384.725,00	305.606,00	356.719,00	381.028,00
0,00	0,00	0,00	0,00	0,00	0,00	0,00	810.305,00	1.385.507,00	1.777.117,00	1.817.152,00	802.473,00	316.855,00	310.950,00	380.281,00	374.170,00	710.998,00	612.585,00	2.254.930,00	2.564.506,00	2.651.204,00
627.412,00	726.751,00	780.394,00	700.638,00	841.809,00	576.343,00	566.611,00	595.263,00	541.654,00	557.717,00	708.245,00	567.217,00	522.009,00	479.878,00	499.242,00	487.897,20	534.951,40	492.757,01	489.495,00	428.535,20	425.130,90
203.004,00	218.121,00	247.787,00	254.305,00	433.490,00	284.433,00	251.348,00	285.389,00	245.009,00	244.097,00	369.459,00	263.725,00	230.588,00	191.321,00	191.621,00	207.507,20	234.124,40	227.611,01	219.322,00	206.415,20	221.022,90
233.225,00	326.524,00	339.588,00	251.551,00	219.549,00	144.994,00	147.444,00	139.608,00	113.285,00	138.737,00	146.987,00	116.891,00	120.590,00	115.418,00	94.880,00	120.315,00	114.670,00	113.692,00	64.741,00	34.013,00	
191.183,00	182.106,00	193.019,00	194.782,00	188.770,00	166.916,00	167.819,00	170.266,00	183.360,00	174.883,00	191.799,00	186.601,00	170.506,00	172.754,00	179.115,00	185.188,00	180.244,00	150.476,00	156.481,00	157.379,00	170.095,00
														345,00	390,00	322,00	268,00	0,00	0,00	0,00
1.682.145,00	1.451.700,00	1.759.652,00	1.645.107,00	1.538.543,00	1.694.242,00	1.521.087,00	1.642.184,00	1.804.269,00	2.182.908,00	1.268.056,00	1.234.788,00	2.198.257,00	1.911.715,00	1.620.796,00	1.970.405,00	982.203,93	2.212.154,71	1.898.816,06	1.481.990,87	1.731.302,06
1.438.296,00	1.227.277,00	1.480.550,00	1.340.353,00	1.251.620,00	1.439.879,00	1.263.437,00	1.371.180,00	1.486.372,00	1.847.547,00	1.026.615,00	1.013.156,00	1.917.180,00	1.663.941,00	1.343.825,00	1.672.994,00	786.771,31	1.848.807,97	1.632.948,25	1.250.632,65	1.506.177,11
1.278.081,00	1.065.818,00	1.332.953,00	1.118.383,00	1.048.659,00	1.287.578,00	1.097.406,00	1.238.982,00	1.373.264,00	1.722.214,00	954.591,00	912.746,00	1.761.331,00	1.529.217,00	1.233.395,00	1.570.295,00	719.357,31	1.744.737,97	1.524.605,26	1.177.734,65	1.385.710,11
160.215,00	161.459,00	157.597,00	151.970,00	204.961,00	172.301,00	166.026,00	132.098,00	113.108,00	120.333,00	71.024,00	100.410,00	154.849,00	134.724,00	111.430,00	102.699,00	67.434,00	104.070,00	108.343,00	72.896,00	120.467,00
243.849,00	224.423,00	279.102,00	304.754,00	284.923,00	254.363,00	257.655,00	271.104,00	317.897,00	340.361,00	242.441,00	221.632,00	282.077,00	247.774,00	276.971,00	297.051,00	195.432,62	363.346,73	265.867,80	231.358,22	227.124,96
564.132,00	575.989,00	640.596,00	632.092,00	200.378,00	195.415,00	201.679,00	196.839,00	345.572,00	518.758,00	537.447,00	551.467,00	573.630,00	563.069,00	558.454,00	559.849,00	602.143,67	557.744,00	647.356,55	639.058,33	
514.689,00	531.443,00	598.237,00	583.444,00	515.183,00	150.770,00	148.464,00	147.582,00	301.392,00	470.775,00	490.946,00	514.604,00	529.217,00	524.482,00	534.156,00	523.008,00	570.092,00	561.932,00	519.501,00	612.650,55	605.416,13
49.443,00	44.546,00	42.359,00	48.648,00	47.195,00	44.645,00	53.215,00	49.257,00	44.180,00	47.983,00	46.501,00	36.863,00	44.413,00	38.587,00	24.298,00	36.841,00	41.007,00	40.211,67	38.243,00	34.706,00	33.642,20
3.068,00	106.552,00	178.281,00	305.215,00	367.484,00	382.773,00	447.308,00	558.463,00	659.039,00	711.635,00	694.275,00	897.878,00	1.159.125,00	1.158.157,00	1.050.833,00	910.495,57	936.728,76	1.125.798,28	1.180.584,66	1.146.752,80	1.273.269,83

Results



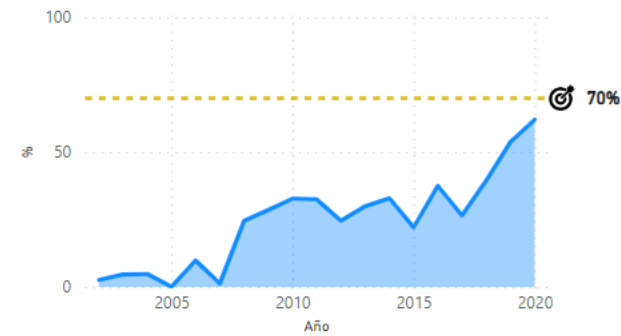
Observatorio de
Transición Justa
de Asturias



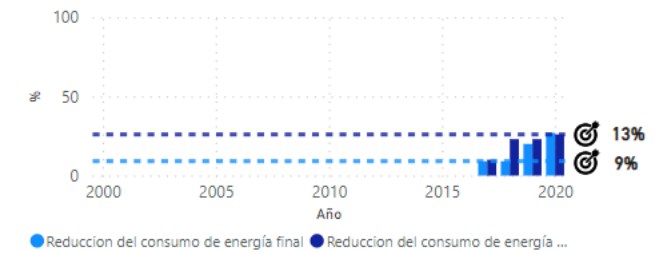
Results



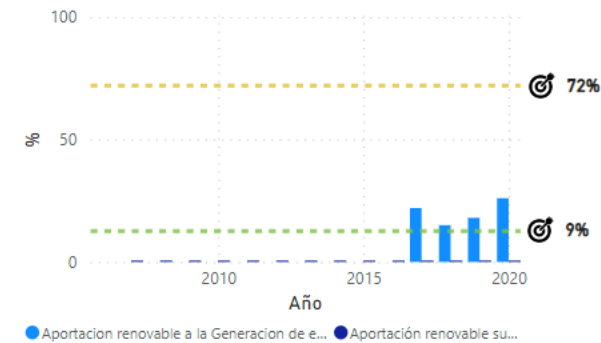
Emisiones GEI



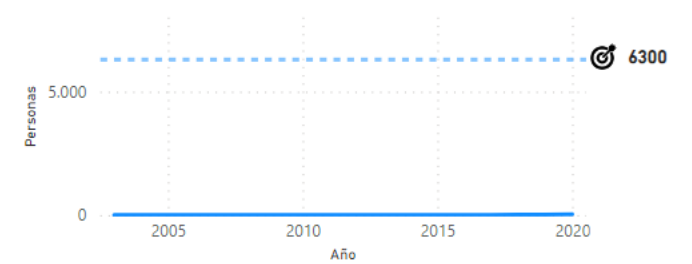
Reducción del consumo energético



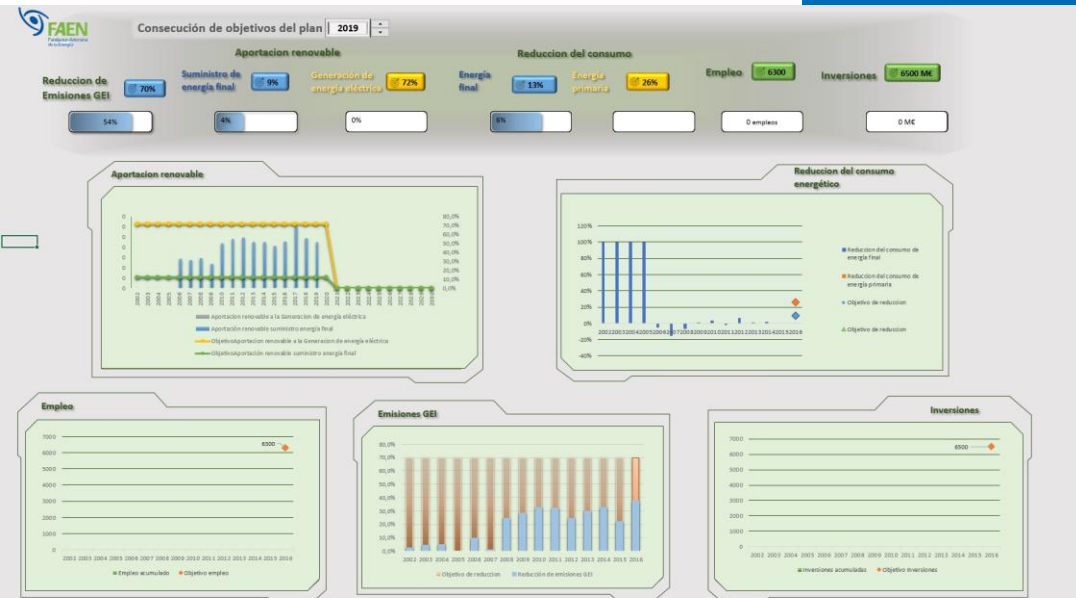
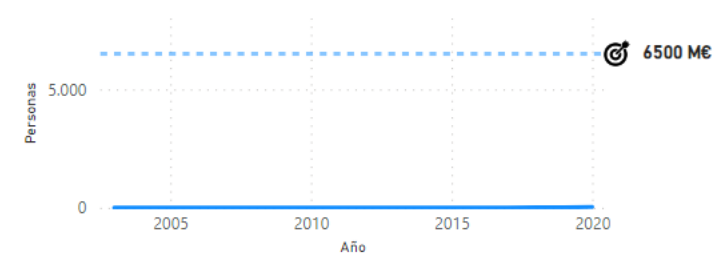
Aportación renovable



Empleo



Inversiones



Other Reports

1

Strategy for a Just Energy Transition in Asturias

2

Strategy for Energy Rehabilitation of Buildings in Asturias

3

Final Document Joint Commission

4

Professional Guide for Self-Consumption Procedures

5

Municipal Energy Management Guide

6

Pellets Guide

7

Energy Savings Guide



Conclusions

1

Improving the data collection process by online questionnaires

2

Clearly set “hard” deadlines for delivering results for better planning and progress

3

Reduction of the number of participants.

4

Data providers engagement planes



**Transición
Energética**

Menos huella
Más planeta



Transición Energética

Menos huella
Más planeta

REGIO1ST



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• www.faen.es



• faen@faen.es



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