



UDINE UNIVERSITY Energy efficiency contract

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ENGIE Italia: key numbers

3.400

employees

1

million customers

60

offices

More than

2.000 schools

More than

350

municipalities

650
THOUSAND
public lighting points

80

hospitals

10

THOUSAND efficient buildings

2.600 condominiums

30

Universities, museums, theatres

2

Smart Cities

200

THOUSAND customers in home services

ENGIE Italia: presence and market







Public and private healthcare



Museums, universities, cultural institutions and Sports



Transportation infrastructure



Industries



Public Administrations



Small to Medium Businesses and Professionals



Families



Condominiums

Udine University- Project Goals



- Reduction on energy consumption and costs
- Reduction on CO2 emissions
- Reduction on operational costs
- Digitalization
- ✓ Improve the service level
- ✓ Improve plants reliability

Udine University- Project Scope



- 20 buildings
- ✓ 171.000 m2
- 8.950 MWh/year

Services to be provided

- ✓ O&M electric systems
- ✓ O&M sanitary water systems
- ✓ Maintenance of fire-fighting, anti-intrusion and lift systems
- Maintenance of gates and bars
- Ordinary and extra ordinary maintenance
- Extra-works

Udine University- Project steps



Definition of project goals and scope 2 Data collecting (energy consumptions, maintenance costs, ...) Survey on the plants Sharing the project with the customer (Draft contract, energy efficiency works, ,...) Project evaluation (from the customer) 6 Appointment as a promoter

8 Sign of the contract

Tender phase

Udine University - Investments in energy efficiecy



Building	Aderess	Circulation system	Refrigerati on Unit X	Transformer X	Inverter	FVT	Cogenerator
Palazzo Antonini	Via Petracco, 8	X			Х		\$
Blanchini	Via MaRgreth, 3	X					
Palazzo Caiselli	Vicolo Florio, 2	X	X		Х		
Palazzo Solari	Vicolo Florio, 4	Х					
Palazzo Camavitto	Via Zanon, 6		X				
Palazzo Florio	Via Palladio, 8	Х					
Scuderie Palazzo Florio	Via Cosattini, 29	Х					
Palazzo Santa Lucia	Via Mantica, 3	Х			X		
Casa dello studente	Piazzale Simonetti, 1	Х			X		
Convento di S. Chiara	Via Santa Chiara, 30				X		
Casa Lenassi	Via IX Agosto, 8	Х			X		
Tomadini	Via Tomadini, 30	Х				X - 50 kWp	
Grandi Aule Tomadini	Via Tomadini, 30				X		
Palazzo Garzolini-Toppo Wassermann	Via Gemona, 92	X			Х		X
Padiglione Tullio	Via Colugna, 44	Х			X		
Via Larga	Via Larga, 42				X		
Palazzo Falconieri	Via Mazzini, 3	Х					
Residence Ginestra	Via Treppo, 18				X		
Ex Basket	Via Cotonificio					X - 50 kWp	
Rizzi	Via Cotonificio		X			X - 40 kWp	

Relamping LED of 19.000 lights point on 21.170 total (90%)

Saving on CO₂ 914 tons/year

Benefit on current expenditure





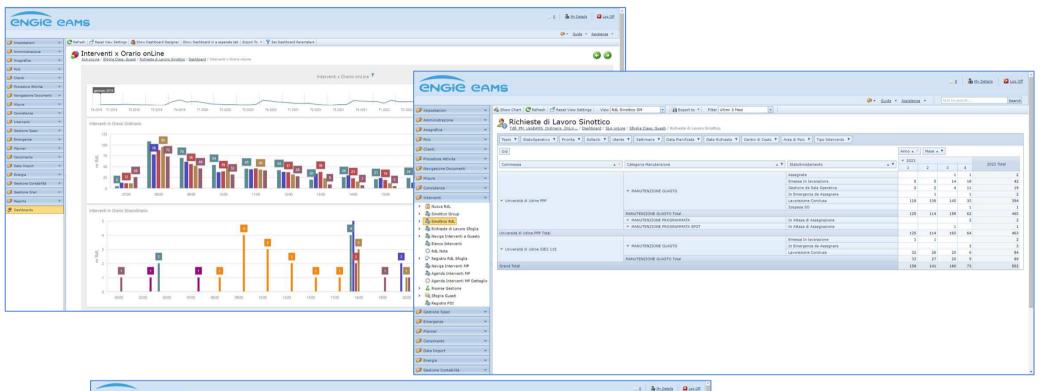
Udine University – Energy monitoring

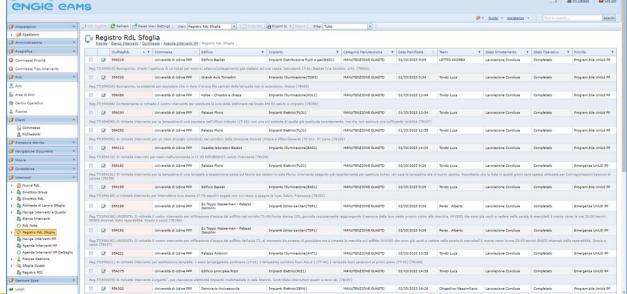


			DAMAGE		UTILIZZO			CONSUMI			
			STAGIONALE	U. P.	CADENZA RILIEVI	UTILIZZO %	Specifiche Errori	CONSUMATO REALE	CONSUMO PREVISTO	MAGGIOR/MIN CONSUMO	
	ID 001 - Polo		1-2-2-22					[kWh]	[kWh]	[kWh]	
Università degli studi di Udine - EE	Scientifico Rizzi	0053257-001	-20,73%	21	30	100%		937.642	1.182.811	-245.169	
	Cotonificio ed ex	0053257-002	8,21%	→	30	100%		586.868	542.331	44.537	
	ID 003 - Polo Medico Kolbe	0053257-003	-9,27%	→	30	100%		185.228	204.154	-18.926	
	ID 004 - Palazzo Antonini-Cernazai	0053257-004	-17,54%	->	30	100%		126.264	153.128	-26.864	
	ID 005 - Toppo Wasswermann	0053257-005	-10,50%	21	30	100%		107.001	119.550	-12.549	
	ID 006 - Convento di S. Chiara	0053257-006	-16,65%	20	30	100%		46.882	56.245	-9.363	
	ID 007 - Rustici Pagnacco	0053257-007	-38,86%	21	30	100%		43.342	70.886	-27.544	
	ID 008 - Palazzo Florio	0053257-008	-29,73%	24	30	100%		52.735	75.051	-22.316	
	ID 009 - Palazzo Tomadini	0053257-009	-6,27%	21	30	100%		85.882	91.626	-5.744	
	ID 010 - Via Colugna Padiglione Tullio	0053257-010	-20,64%	21	30	100%		36.222	45.642	-9.420	
	ID 011 - Via Larga	0053257-011			30	0%					
	ID 012 - Residence Ginestra	0053257-012	-57,66%	->	30	100%	TAGLIO ALI INFERIORE	20.873	49.295	-28.422	
	ID 013 - Palazzo Camavitto	0053257-013	-21,26%	21	30	100%		9.797	12.443	-2.646	
	ID 014 - Palazzina ex Kersevan	0053257-014	-34,92%	•	30	100%		4.436	6.816	-2.380	
	ID 015 - Blanchini	0053257-015	21,12%	20	30	100%		77.504	63.992	13.512	
	ID 016 - Palazzo Caiselli	0053257-016	-10,25%	21	30	100%		32.839	36.590	-3.751	
	ID 017 - Casa dello Studente - Gemona	0053257-017	-15,67%	21	30	100%		37.713	44.720	-7.007	
	ID 018 - Lab. Arch Aquileia	0053257-018	-55,45%	21	30	100%	TAGLIO ALI INFERIORE	74	166	-92	
	ID 019 - Casa Lenassi	0053257-019	-42,17%	->	30	100%		4.638	8.020	-3.382	
	ID 020 - Azienda Agraria via Pozzuolo	0053257-020	-32,71%	•	30	100%		16.137	23.983	-7.846	
	ID 021 - Rustici via Pozzuolo	0053257-021	-5,40%	21	30	100%		6.442	6.810	-368	
IIUD - EE	Diffusione:	690	-13,45%	21		95%		2.418.519	2.794.258	-375.739	

Udine University - Digitalization







Contract summary



- ✓ Annual fee: € 545.000,00
- ✓ Start date: 1 January 2022
- ✓ <u>Duration</u>: 10 years
- ✓ <u>Total capex</u>: € 2.500.000,00 (of which € 1.200.000,00 financed by the University)
- ✓ Capex must be carried out within 18 months





Thank you!





