

LampNet

For New Smart Cities

MULTIFUNCTION
Charging Station

E-Mobility

4.0



GREENbusiness Srl

Now this is it:



Or at most so:



ITALIAN SITUATION

1^a

CAUSE OF
POLLUTION

54%

EMISSION OF
PM10

27%

EMISSION OF
CO2



We have high problem of pollution..
in Italy as in the rest of World !

TODAY'S PROBLEMS..

1° HIGH POLLUTION



2° FEW E.V.
CHARGING POINTS

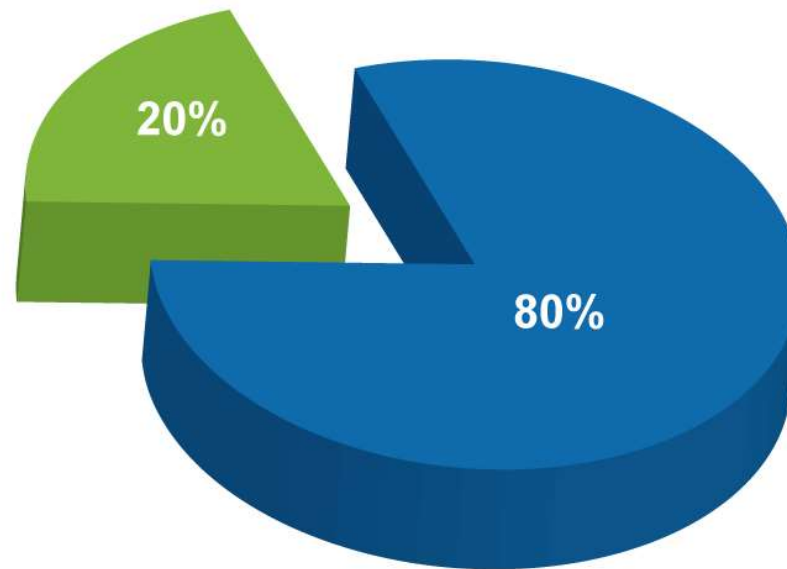


3° ELECTRIC RECHARGE
FROM FOSSIL SOURCES



“Today, the transition to electric mobility is not supported by the production of energy from renewable sources for charging cars”

“This transition is useless if electric vehicles are charged with fossil energy”



Consequences



air quality problems will not be sufficiently solved without a transition in road transport



frequent traffic restrictions to the most polluting vehicles as emergency measures to mitigate more critical pollution levels



despite the large preference of consumers 44% for electric vehicles with low environmental impact, a significant 48% is discouraged by the lack of public recharging points

End Users



E-Charge Providers



ECONOMIC ADVANTAGES



LAMPNET AMBITIOUS GOALS

Expected Results:

Short period



Top-up infrastructure:

- Realization of an efficient and widespread charging network
- achieve EU 2020 targets
- Support the Municipalities in the provision of public utility service

Medium period



Users of electric vehicles:

- facilitate all current users
- to encourage the transition to electric mobility for all future users (citizens, public administrations, companies, etc.)
- Reduction cost of kWh for E.V. charging scope, with implicit advantages for end users

Long period



Environment:

- Reduce transport CO2 emissions
- Improving air quality (PM10, NOx)
- Contribute to the decarbonisation of the economy
- Maximization of economic results also for the E-Charge Providers

Forward-looking vision

MARKET TRENDS

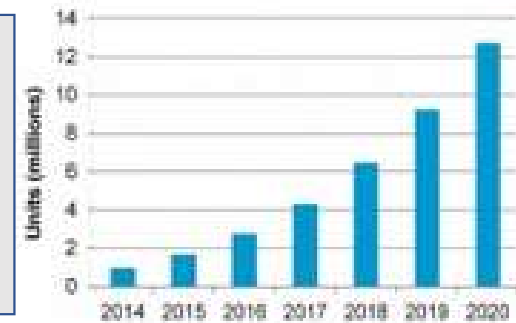
The Charging Infrastructure

NETWORK



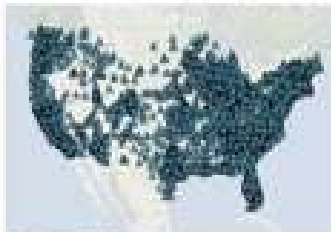
Huge infrastructure development:

from 1 million in 2014 to 2.7 million in e-charging points expected by the end of 2020 (Source: IHS)



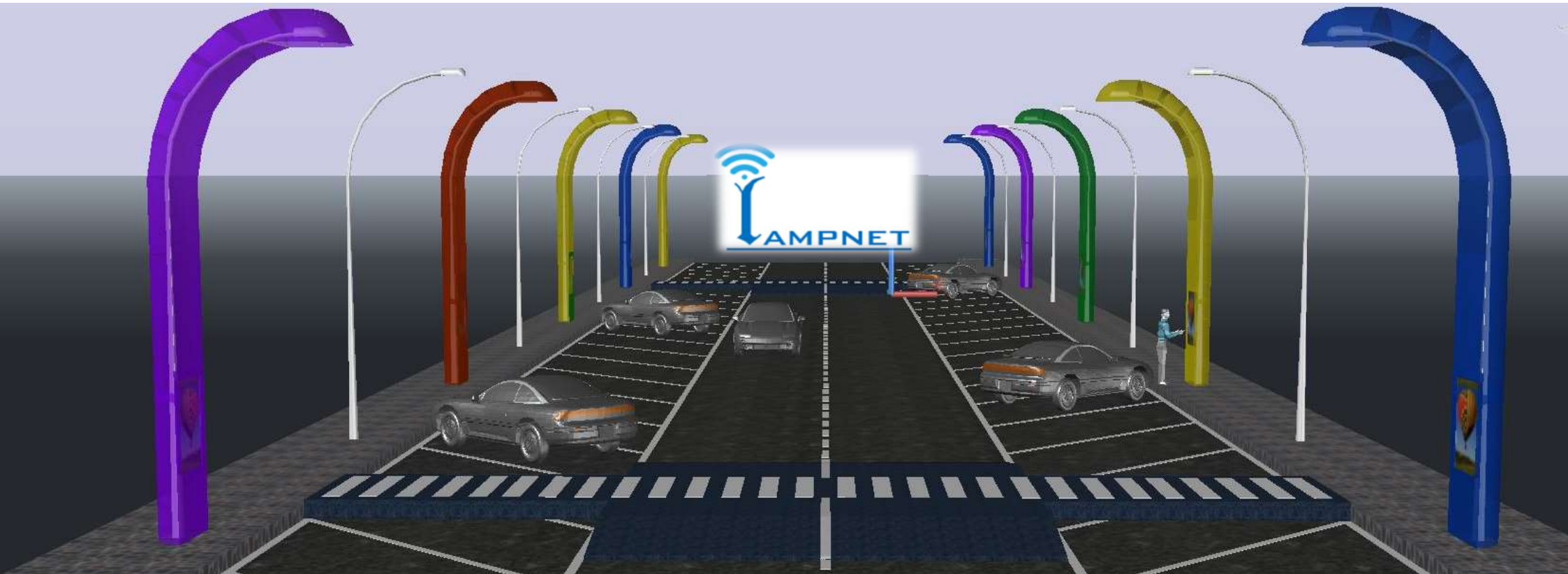
Fonte: IHS www.ihs.com

Network ricarica elettrica USA (Q1/17)

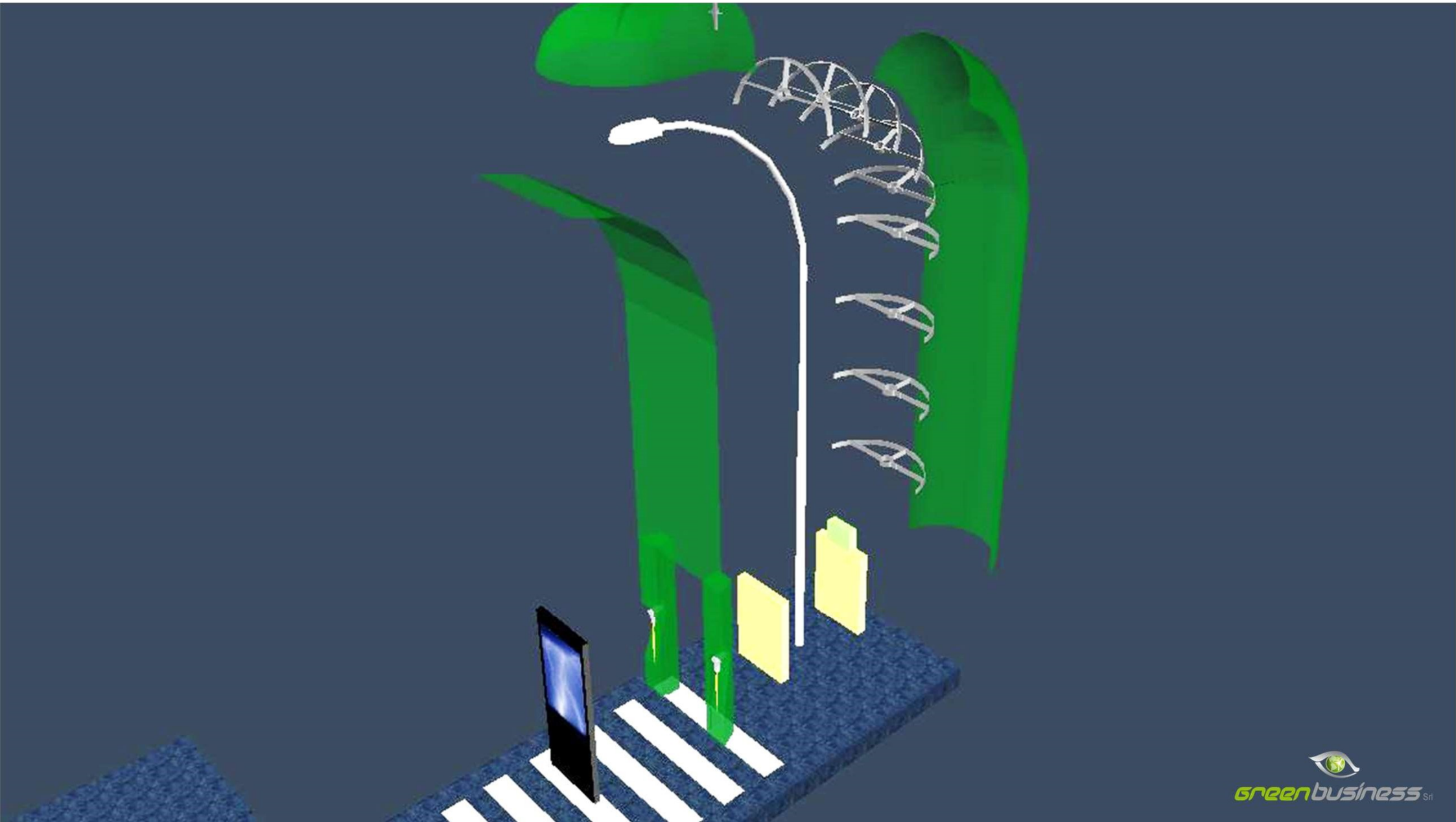


Future development of technology:

- Use and maximization of green energy for recharging purposes
- Development of induction charging solutions.
- At 2020 only 15 minutes will be enough to recharge the battery (source Porsche, Volkswagen group)



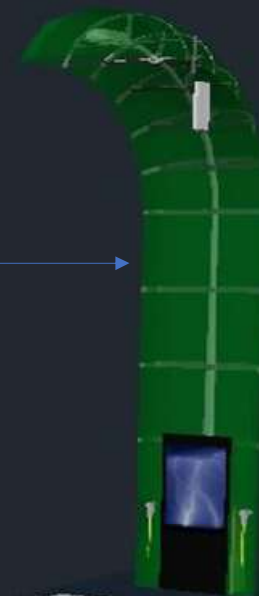
**Innovative PV-Kit to applies at existing street lamps
for urban restyling and renewable energy production**



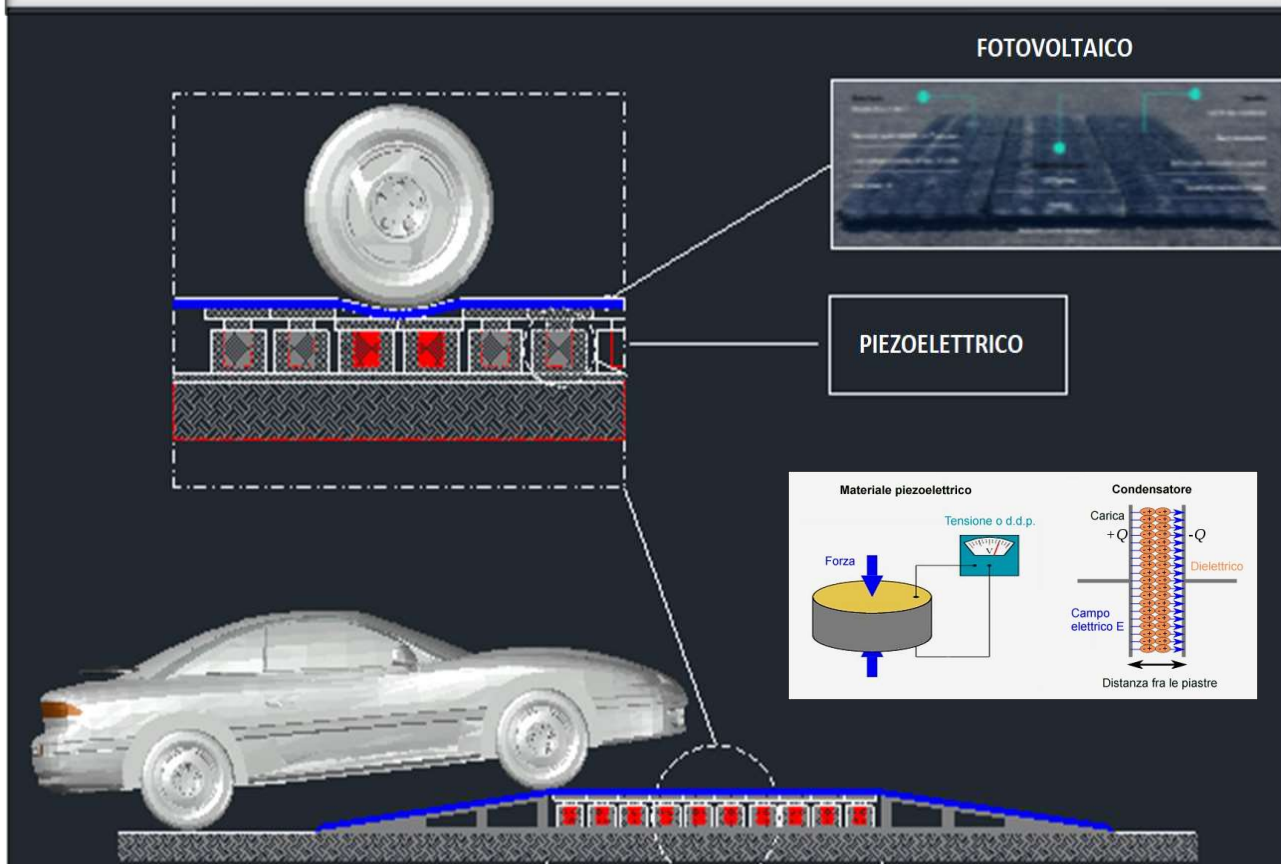
LampNet System is composed of 2 principal parts:

E-SPEED BUMP «HYBRID»
SUPERFICIAL PHOTOVOLTAIC
+
PIEZOELECTRIC SUBSTRATE

PHOTOVOLTAIC COVER KIT
&
MULTIFUNCTION SERVICE LAMP



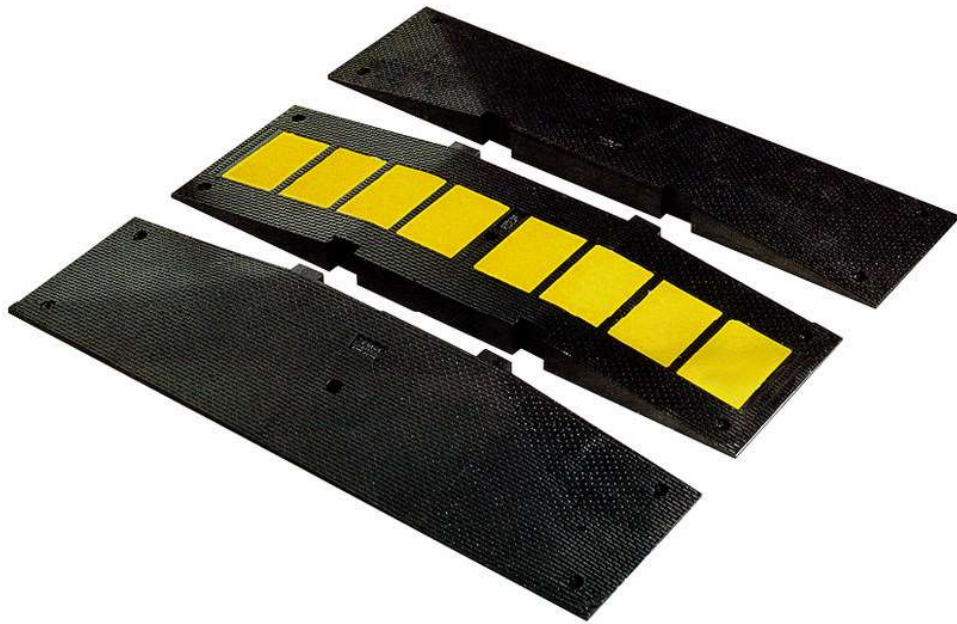
Tech Spec of Road Speed Bump



It produces renewable energy both through a superficial layer of photovoltaic than from the passage of the electric vehicles through a piezoelectric system. The energy produced is transferred to adjacent lamps for charge the lithium batteries useful for charging electric vehicles. The surplus energy is fed into the grid's electricity system for urban consumption.

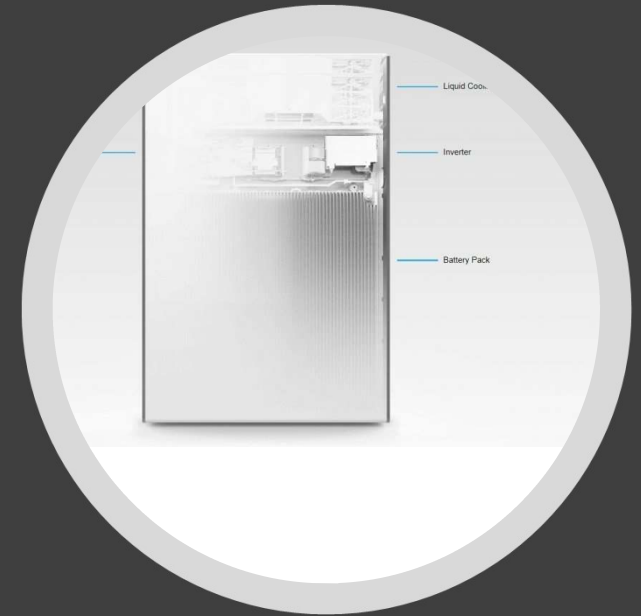
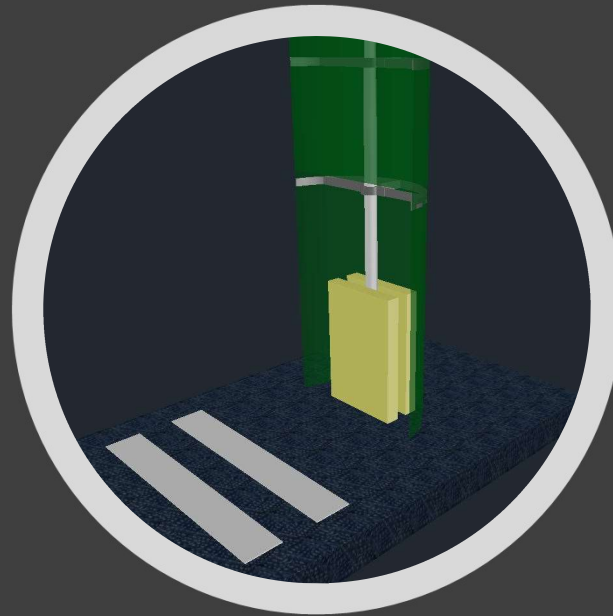
The LampNet E-Speed Bump

It's also useful as a connection bridge and electric crossing, front of street, thus avoiding undergrounds excavations and aerial crossings.



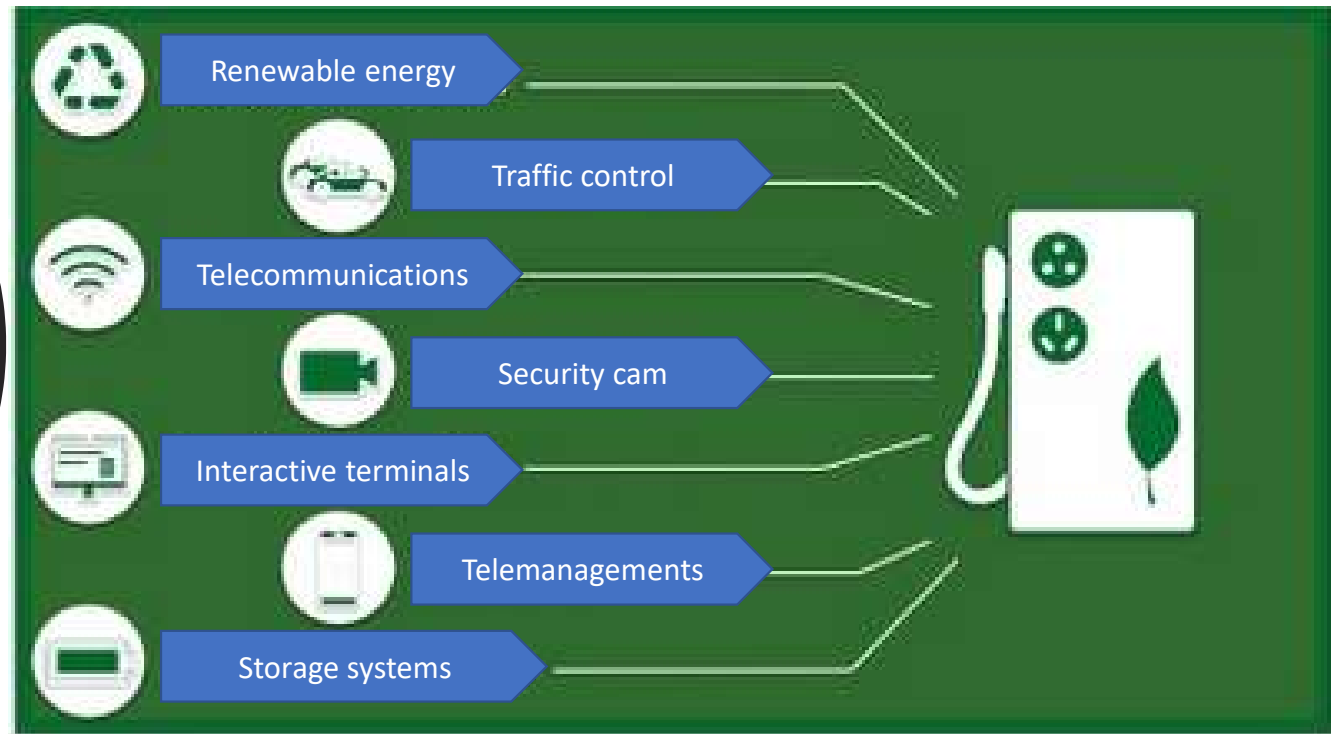
With installation of n.2 speed bump from 20mq, we can produce renewable energy as an photovoltaic plant of around 80/90,00 kWp, through an average crossing of less than 25-35 vehicles in a minute.

And when we don't have any vehicular crossing we can produce at same with an superficial substrate of photovoltaic.



BATTERY STORAGE
with min. capacity of 30.0 KWh

**Numerous
service of
public utility
with a new
solution
“ALL IN ONE”**





Our conception of driving will change

Safety:

93% accidents > human errors
60% accidents > only one vehicle
2,5% US GDP > economic cost

- **Costs:** 90% reduction in accident costs
- **Free time:** +250 hours of free time per year
- **Space:** Slower urban traffic (-30%) and parking cost savings
- **Emissions:** Widely reduced polluting emissions



* fonte National Highway Traffic Safety Administration

Smart Grid infrastructure able to develop Autonomous Driving

CHARACTERISTICS OF THE LAMPNET SYSTEM



- Charging for electric vehicles
- Street lighting costs reduction
- Innovative photovoltaic modules in the cover kit-custom solutions
- Lithium batteries to energy storage
- Digital electricity connection in Smart grid
- Connectivity service 4G / 5G, internet service provider
- Payment trough prepaid cards and smartphones
- Integrated IOT
- Info city service - info traffic- ticket parking
- Big data for environmental and meteorological monitoring
- SOS emergency button with warning to urban safety agencies
- Video surveillance cameras / Security cam
- Mapping system to get to the nearest charging point

Network of communication and interconnection that transforms a simple street lamp...

in a multi-function operations center, principally dedicated as E.V. charging point

Competitive Advantages



Capillarization of electric charging points

Electric vehicles will be charged with renewable energy and not fossil fuels

Multifunctionality, providing all the services that can be integrated with Lampnet from renewable sources (wi.fi, lighting, data collection, telephone repeaters, securitycam, etc.)

Grid balancing, use of storage batteries to compensate grid electricity peaks

Use of storage batteries in compensation of eventual energetic black-out

Certainty of data communication directly “on road” in support of the autonomous driving

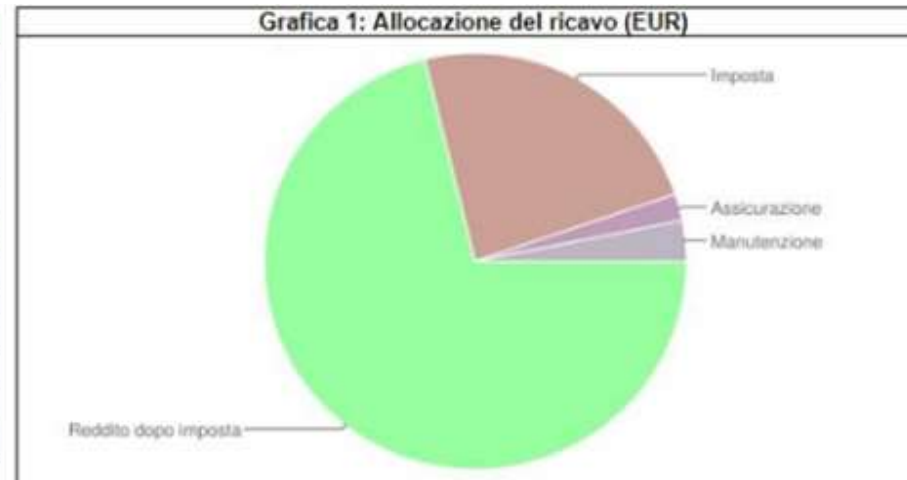
Touch-screens can be used to issue public order information and/or for marketing advertising

Remote body-temperature scan, especially require to fight the COVID pandemic.

LampNet Payback: 3 years

Sommario:	
Valore (EUR)	235000
Capitale proprio (EUR)	235000
Prestito (EUR)	0
Valore attuale' (EUR)	1656229
Costo di prod. costante dell'energia (€/kWh)	0.235
Tipo del prestito	Riscattabile
Periodo d'ammortamento	3.4
Dividendo annuale (EUR)	NA
Dividendo annuale (%)	NA
Rendita effettiva prima di imposta (%)	36.6
Aliquota effettiva (%)	24.9
Rendita effettiva (%)	29.6

Scarica sommario in formato pdf



Flusso di cassa (EUR)																				
Anno	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Energia prodotta (kWh)	198750	198154	197558	196961	196365	195769	195172	194576	193980	193384	192788	192191	191595	190999	190402	189806	189210	188614	188018	187421
Ricavo	89438	91844	94315	96851	99455	102127	104871	107687	110578	113545	116591	119717	122928	126220	129600	133070	136632	140287	144039	147890
Affitto	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Assicurazione	-2000	-2040	-2081	-2122	-2165	-2208	-2252	-2297	-2343	-2390	-2438	-2487	-2536	-2587	-2639	-2692	-2746	-2800	-2856	-2914
Manutenzione	-3000	-3060	-3121	-3184	-3247	-3312	-3379	-3446	-3515	-3585	-3657	-3730	-3805	-3881	-3959	-4038	-4119	-4201	-4285	-4371
Tasso d'interesse	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RIS	84437	86744	89113	91545	94042	96607	99240	101943	104719	107569	110495	113500	116585	119751	123003	126341	129768	133286	136898	140606
Estinzione	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Debito rest.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reddito prima di imposta*	84437	86744	89113	91545	94042	96607	99240	101943	104719	107569	110495	113500	116585	119751	123003	126341	129768	133286	136898	140606
Ammortamento	11750	11750	11750	11750	11750	11750	11750	11750	11750	11750	11750	11750	11750	11750	11750	11750	11750	11750	11750	11750
Reddito tassabile	72687	74994	77363	79795	82292	84857	87490	90193	92969	95819	98745	101750	104835	108001	111253	114591	118018	121538	125148	128856
Imposta	-20280	-20923	-21584	-22263	-22960	-23675	-24410	-25164	-25938	-26734	-27550	-28388	-29249	-30132	-31040	-31971	-32927	-33909	-34916	-35951
Reddito dopo imposta	54158	55821	57529	59282	61083	62932	64830	66779	68781	70836	72945	75112	77336	79619	81963	84370	86841	89377	91982	94655
Reddito cumul.	54158	129978	197507	266789	337872	410804	485634	562413	641194	722030	804975	890087	977422	1067041	1159005	1253375	1350216	1449593	1551575	1656229
% ammortizzato	27.3	55.3	84.0	113.5	143.8	174.8	206.7	239.3	272.8	307.2	342.5	378.8	415.9	454.1	493.2	533.4	574.6	616.8	660.2	704.8

*The indicated price regarding the supply of LampNet Kit for n.5 street lamp + 2 energy speed bump (to around 40 mq) *

Our Team:



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LAMP NET

The Urban Revolution

