

Perugia, OCTOBER 2013



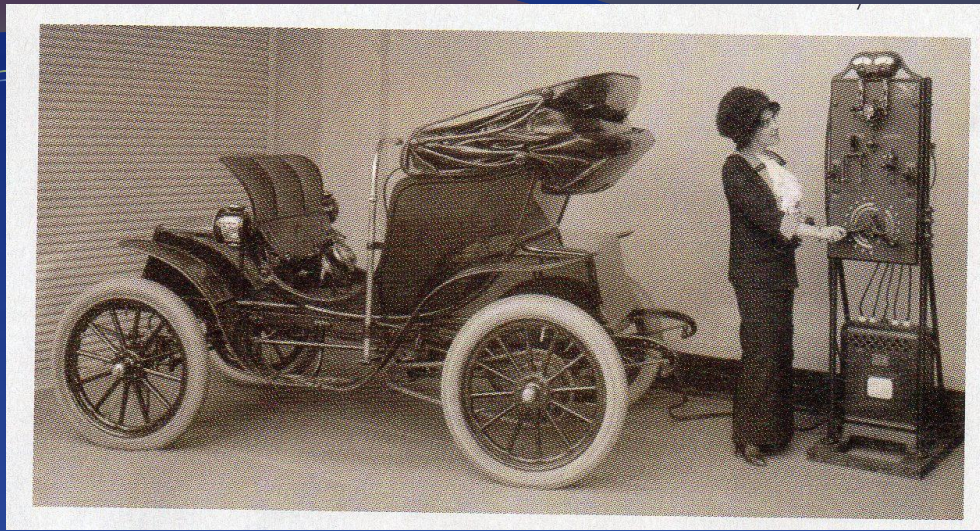
Comune di
Perugia

U.O. SERVIZI
TECNOLOGICI
ENERGETICI INFORMATICI



ELECTRIC MOBILITY IN MUNICIPALITY OF PERUGIA

RELATION Eng. De Micheli
U.O. Servizi Tecnologici, Energetici, Informatici



ELECTRIC CARS WERE POPULAR IN THE EARLY YEARS OF THE 20th CENTURY. IN THE 70s, DURING THE MIDDLE EAST OIL CRISIS, THERE WERE SOME PROPOSALS OF ELECTRIC CARS, BUT THE WORLD'S CAR FLEET HAS REMAINED POWERED BY PETROL OR DIESEL



IN THE LAST YEARS THE WORLD'S BIG CAR MAKERS,
RENAULT, CITROEN, TOYOTA, NISSAN, MITSUBISHI, FORD,
AND OTHERS,
ARE EXPERIMENTING NEW ELECTRIC CARS
BECAUSE OF CO₂ LEGISLATION
AND
GLOBAL POLITICAL SUPPORT OF ELECTRIC MOBILITY.

THE INTRODUCTION OF BATTERY ELECTRIC VEHICLE (BEV) AND PLUG IN HYBRID VEHICLE (PHEV) IN THE EUROPEAN MARKET SEEMS AN OPPORTUNITY TO REDUCE AIR POLLUTION IN OUR CITIES IN COMPARISON OF INTERNAL COMBUSTION ENGINE (ICE) SUPPLIED BY PETROL OR DIESEL.

OTHERS POSITIVE FACTORS ARE :
THE NOISE REDUCTION
THE PETROL INCREASE COST

FOR A VEHICLE OF 1000kg WEIGHT

SUPPLY BY PETROL (ICE)

$5,5\text{l}/100\text{km} \times 1,8\text{€}/\text{l} = 10\text{€}/100\text{km}$

(INCREASE TREND)

SUPPLY BY ELECTRICITY (BEV)

$12\text{kWh}/100\text{km} \times 0,25\text{€}/\text{kWh} = 3\text{€} /100\text{km}$

FOR A VEHICLE OF 1000kg WEIGHT

SUPPLY BY PETROL

STORAGE CAPACITY 13.000Wh/kg

SUPPLY BY ELECTRICITY

STORAGE CAPACITY 100Wh/kg

OTHER ELECTRIC CARS DISADVANTAGES :

INITIAL COST IS MORE EXPENSIVE

AUTONOMY 100km INSTEAD 1000km

TIME TO RECHARGE HOURS, NOT MINUTES

HOWEVER THE ENVIRONMENTAL ADVANGES ARE EVIDENT DURING THE ELECTRIC VEHICLES UTILISATION, APPEAR SOME NEGATIVE EFFECTS DURING DIFFERENT TIMES:

1. PRODUCTION OF ELECTRICAL ENERGY
2. BATTERY RECHARGE AND DISPOSE

MANY RESEARCH INSTITUTES ARE STUDING
THE LIFE CYCLE ASSESSMENT LCA
BASED ON ISO 14040 RULES

TODAY THE DISCUSSION
IS INVOLVING MANY PEOPLE, NOT ONLY THE
RESEACHERS AND DEVELOPMENT EXPERTS

IF WE SUPPLY ENERGY TO RECHARGE BATTERIES
FROM RENEWABLE SOURCE THE
ENVIRONMENTAL ADVANTAGE WOULD BE
REMARKABLE;

IF WE SUPPLY ENERGY FROM OLD CARBON
POWER PLANT THE ENVIRONMENTAL IMPACT OF EV
WOULD BE SIMILAR TO PETROL CARS.

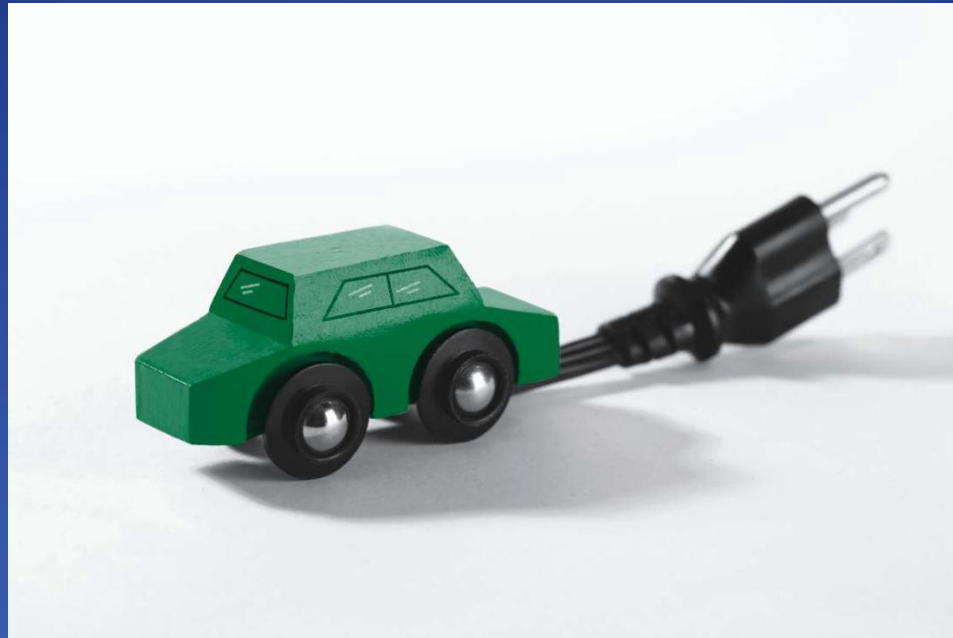
FOR A RIGHT EVALUATION WE MUST CONSIDER
THE REAL SOURCES' ENERGY MIX OF OUR
COUNTRY

A QUALIFIED RESEARCH OF RSE (ITALIAN
RESEARCH CENTER IN ELECTRICAL)
BASED ON ACTUAL ITALIAN ENERGY
SOURCES MIX, DECIDES THAT
THE PLUG IN HYBRID VEHICLES INVOLVE
BEST RESULTS TO REDUCE AIR
POLLUTION CONSIDERING THE
COMPLETE CAR LIFE CYCLE



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WHAT CAN DO A MUNICIPALITY?

PROJECTS REALIZED

“POSTAL ZEV” CONSISTED IN PROVIDING Poste Italiane WITH OVER **40** VEHICLES MADE BY DUCATI;

“BIKE SHARING” CONSISTED IN REALIZING 6 PARKING AND RECHARGE STATIONS FOR MORE THAN **40** BIKES

“PUBLIC CAR RECHARGE STATIONS”: IS THE INFRASTRUCTURE TO RECHARGE INTO THE CITY THE ELECTRIC CARS, BASED ON MULTIVENDOR PAYMENT SYSTEM

IN PERUGIA THERE ARE **28** RECHARGE STATIONS INSTALLED BY ELECTRIC DISTRIBUTION COMPANY (ENEL) AND MUNICIPALITY OF PERUGIA

RECHARGE STATIONS LOCATION

- THE AIMS ARE TO COVER THE MAIN URBAN AREAS, IN PARTICULAR HISTORICAL CENTER, SEARCHING THE VISIBILITY OF RECHARGE POINTS;
- COVER MOBILITY INFRASTRUCTURE (AIRPORT, RAIL STATIONS, Fontivegge, Perugia Sant'Anna e Ponte San Giovanni, MINIMETRO' STATIONS, FUTURE CAR SHARING PLACES, PARKING AREAS;
- HOSPITAL, UNIVERSITY, PUBLIC OFFICES, POLICE STATIONS;
- BANKS, CAR RENTAL COMPANIES, SUPERMARKET PLACES, CINEMAS
- ALL WITHOUT CANCEL PEDESTRIAN PATHS OR RESERVED PARKING.

COLONNINE PIAZZA VITTORIO VENETO



COLONNINA, TOTEM



COLONNINA, TOTEM



COLONNINA, TOTEM



COLONNINA IN VIA PALERMO



ELECTRIC CAR POSTER

MUNICIPALITY OF PERUGIA ,

INVITE

ALL OF THE CITIZENS , ALL THE COMPANIES , THE
ASSOCIATIONS ,

TO ADOPT AND USE

BEV AND PHEV TO URBAN MOBILITY USE

ELECTRIC CAR POSTER

MUNICIPALITY OF PERUGIA

OFFER

FREE TRAFFIC RESTRICTED AREA PERMISSION

FREE PARKING IN ALL TOWN AREAS

FREE ADVERTISING FOR COMPANIES

EASY CONDITION FOR ROAD ASSISTANCE

MEETINGS ORGANIZATION AND PROMOTION

(FREE TAXES FOR ELECTRIC CARS ARE ALREADY ALLOW BY
ITALIAN LAW)

4) ADESIONE ON LINE AL MANIFESTO

Area Intranet Comune di P x Comune di Perugia - Elenc x Comune di Perugia x Impostazioni

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Città candidata a Capitale europea della cultura per il 2019



MOBILITÀ ELETTRICA A PERUGIA



Comune di Perugia
Sala dei Notari - Palazzo dei Priori
martedì 6 novembre 2012

Mobilità elettrica a Perugia

Assemblea pubblica
Sala dei Notari- Palazzo dei Priori
martedì 6 novembre ore 16.00

1 2 3 4 5

Il Comune **Aree tematiche** Trasparenza Servizi online Bilanci

Ambiente, energia, territorio, edilizia e trasporti
Ambiente / Territorio e protezione civile / Edilizia / Viabilità e mobilità / Energia

Cultura, sport e tempo libero

www.comune.perugia.it/pagine/aree-tematiche

Ultime notizie In evidenza Pubblicazioni U R P

Determinazione dell'indennità spettante ai membri del Parlamento
Raccolta delle firme per il referendum sull'abrogazione parziale della legge 1261/1965
Luoghi e orari

Borsa di studio "Meredith Susanna Cara Kercher"
Il Comune di Perugia insieme all'Università per Stranieri, all'ADISU, con la collaborazione dell' Ambasciata britannica a Roma e quella italiana a Londra, hanno istituito una borsa di studio per uno studente britannico.

Avviso interruzione energia elettrica
Venerdì 5 novembre 2012 dalle 8.30 alle 12.30 zona Cenerente - Elenco delle vie

Ultime notizie >>

Tg edizione del 2/11/2012

4) ADESIONE ON LINE AL MANIFESTO



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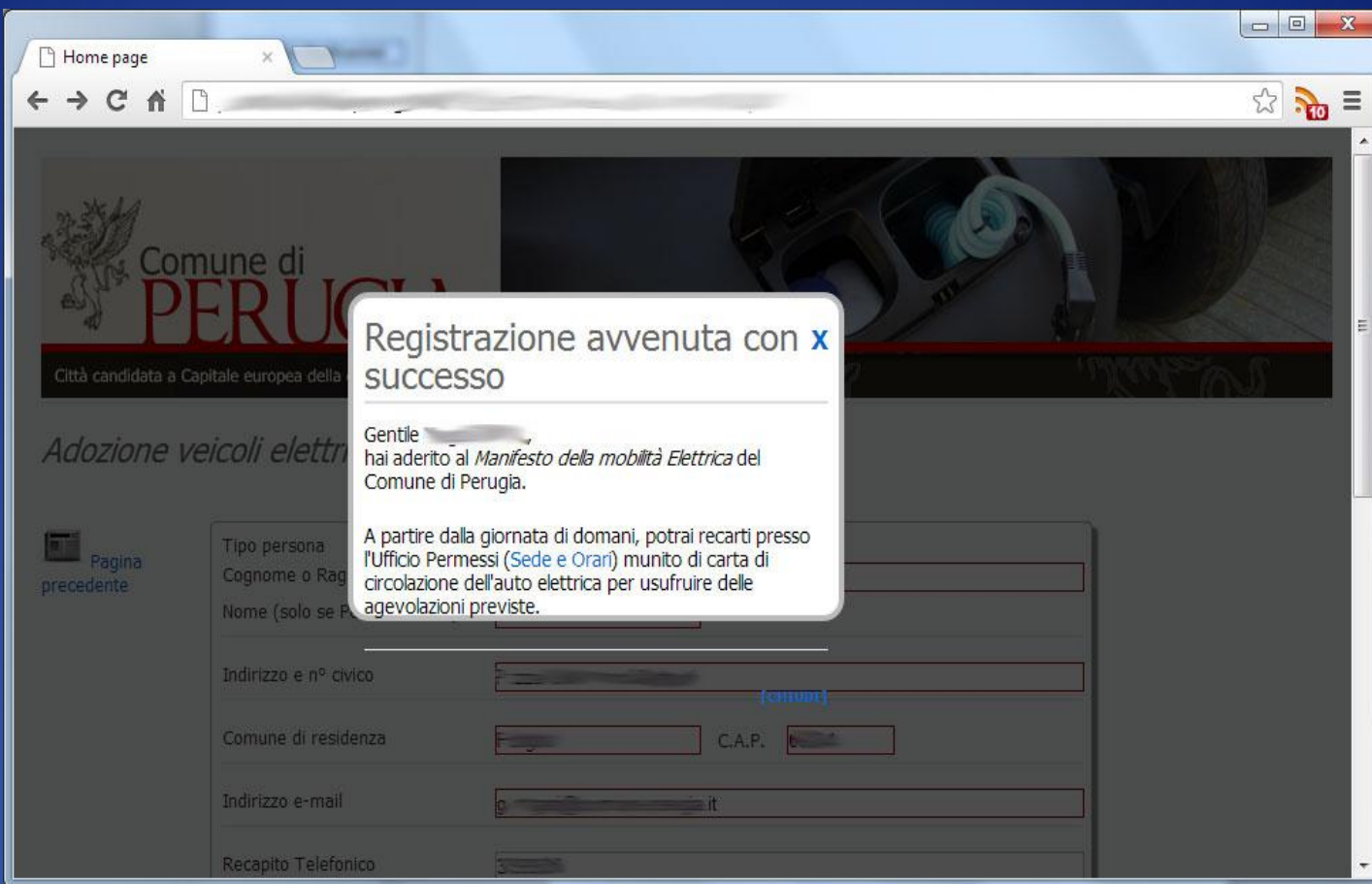


Adozione veicoli elettrici

Tipo persona	<input checked="" type="radio"/> Fisica <input type="radio"/> Giuridica	
Cognome o Ragione Sociale	<input type="text"/>	
Nome (solo se Persona Fisica)	<input type="text"/>	
Indirizzo e n° civico	<input type="text"/>	
Comune di residenza	<input type="text"/>	C.A.P. <input type="text"/>
Indirizzo e-mail	<input type="text"/>	
Recapito Telefonico	<input type="text"/>	
Descrizione Attività	<input type="text"/>	
Chilometri percorsi in un anno	<input type="text"/>	
N° autoveicoli da adottare	<input type="text"/>	
Tipo di titolarità	* <input type="text" value="Selezionare..."/> Specifica 'Altro' <input type="text"/>	
Trattamento dati personali	<input type="checkbox"/> Consenso al trattamento dei dati personali (leggi)	

Per poter procedere al salvataggio del form è necessario che le caselle contrassegnate in rosso siano tutte compilate.

4) ADESIONE ON LINE AL MANIFESTO



A SMART SERVICE

IF YOU NEED TO KNOW THE NEAREST POINT OF RECHARGE YOU CAN CHECK IT ON THE INTERNET. YOU CAN SEE THE FREE STATIONS, THE OCCUPIED STATIONS, THE TIME REMAINING.

PLANNIG

OUR PEAC (ENERGY AND ENVIRONMENT PLAN) CONSIDERS THE INCREASE OF ELECTRIC MOBILITY BY CARS AND BIKES