

BGLOT Home

Current Projects

End of Life Vehicles Licensed Collector and Dismantler in Lom, Bulgaria

Every year, end of life vehicles generate between 8 and 9 million tonnes of waste in the Community which should be managed correctly.

In 1997, the European Commission adopted a Proposal for a Directive which aims at making vehicle dismantling and recycling more environmentally friendly, sets clear quantified targets for reuse, recycling and recovery of vehicles and their components and pushes producers to manufacture new vehicles also with a view to their recyclability.

Directive 2000/53/EC lays down specific requirements for the management of end-of-life vehicles. The Directive's main objective is the prevention of waste from vehicles and, in addition to this, the reuse, recycling and other forms of recovery of end-of-life vehicles and their components so as to reduce the disposal of waste. The Directive also aims to improve the environmental performance of all economic operators involved in the life-cycle of vehicles and especially the operators directly involved in the treatment of end-of-life vehicles.

ELV Waste Estimates

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Electric vehicles (EV) production in Bulgaria

Electric cars are expected to have a major impact in the auto industry given advantages in city pollution, less dependence on oil, and expected rise in gasoline prices.

The future of battery electric vehicles depends primarily upon the cost and availability of batteries with high energy densities, power density, short charge time and long life, as all other aspects such as motors, motor controllers, and chargers are fairly mature and cost-competitive with internal combustion engine components.

Li-ion, Li-poly and zinc-air batteries have demonstrated energy densities high enough to deliver range and recharge times comparable to conventional vehicles.

By the year 2020, an estimated 30% of the cars driving on the road will be battery, electric or plug-in hybrid. It is estimated that there are sufficient li-ion reserves to power 4 billion electric cars.

The cathodes of early 2007 lithium-ion batteries are made from lithium-cobalt metal oxide. That material is expensive, and can release oxygen if its cell is overcharged. If the cobalt is replaced with iron phosphates, the cells will not burn or release oxygen under any charge.

The price premium for early 2007 hybrids is about \$5000 US, some \$3000 of which is for their NiMH battery packs. At early 2007 gasoline and electricity prices, that would break even after six to ten years of operation. The hybrid premium could fall to \$2000 in five years, with \$1200 or more of that being cost of lithium-ion batteries, breaking even after three years.

Smart Grid Reservoir Systems in Bulgaria

In the rapid development of a high tech society, the demand for energy is experiencing an astonishing rate of growth over the last few years. One of the most difficult problems for energy producers is the fluctuation in the demand for electricity during the day time and the off peak evenings. In addition, there are also the variations in demand throughout the seasons of winters and summers.

It is therefore difficult to design power stations and transmission facilities that can operate effectively both for the peak and off-peak power demands, in terms of construction cost and in the best uses of energy resources. If we can reduce these fluctuations successfully, we will be able to operate our power stations more efficiently, to decrease further the operation costs, and to better conserve our resources.

By using an effective power storage system that uses high energy density and efficient batteries, we will be able to reduce the fluctuation by load leveling and peak shaving.

After extensive testing and demonstration, we are confident that our Reservoir Systems are ready for large commercial utilization. The energy storage system will be able play an important role in the stabilization of power demand fluctuation. The system can function as a power source to store electricity power in the grid at low demand and discharge at peak demand.

By applying it to the Smart Grid, it will help obtain the optimum use of the electric energy and improve the electric power quality with more steady frequency.

Industrial Parks development in Bulgaria

Industrial parks are usually located outside the main residential area of a city and normally provided with good transportation access, including road and rail. Industrial parks are close to transport facilities, especially where more than one transport modes coincide: highways, railroads, airports, and ports.

This idea of setting land aside through this type of zoning is based on several concepts:

- To be able to concentrate dedicated infrastructure in a delimited area to reduce the per-business expense of that infrastructure. Such infrastructure includes roadways, railroad sidings, ports, high-power electric supplies (often including three-phase power), high-end communications cables, large-volume water supplies, and high-volume gas lines.
- To be able to attract new business by providing an integrated infrastructure in one location.
- Eligibility of Industrial Parks for benefits.
- To set aside industrial uses from urban areas to try to reduce the environmental and social impact of the industrial uses.
- To provide for localized environmental controls that are specific to the needs of an industrial area.