



**ELE-ZOO**  
Electric Scooter  
by

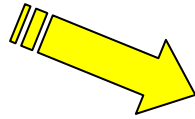
## Why “electric two wheeler”?

- Demand for cruising range is less
- No A/C = less power consumption
- Less vehicle mass due to simple body structure = less energy required for running
- Amount of onboard battery can be reduced
- Less battery = less vehicle cost
- Less vibration of the electric motor assures better riding comfort compared to single cylinder IC engine

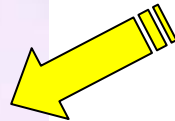
# History of “electric two wheelers” by Tokyo R&D



TRDEX-1: 1984

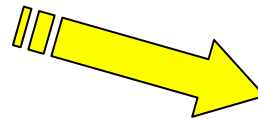


ESX: 1987



ES600: 1992

Manufactured and sold  
500units



ESX-2: 1999

**ELE-ZOO** (pronounced ele-zo): 2003



Weight: 95KG (+10KG only to the original IC engine model)

Max speed: 50km/h

Driving range: approx 20-25km

## Result of development:

Well achieved targeted performance in terms of dynamic performance

HOWEVER

- Longer driving range was demanded
- Verification of performance stability and user-friendliness required more time

Manufactured and sold 50 units in year 2004

Further activities are currently suspended

**ESX-3**

**Li-ion**  
KRI Lithium ion Battery



**PUES® Corporation**

**TOKYO R&D**

A project for the MOE of Japan to develop a technology to implement Li-ion battery on lightweight BEV through 2004 - 2006

Planning:

- Selection & evaluation of Li batteries from 9 suppliers
- Development of BMU & traction system
- Road test of Li powered ELE-ZOO
- Targeted performance:
  - 50km and above driving range on ECE47 mode
  - Weight: approx 92KG
  - Acceleration: 0-100m = 10.7sec

Such favorable and practical performance may get “electric two wheelers” into widespread use in general public as well as fleet applications

Large numbers of gasoline 2 wheelers may be replaced by such “electric two wheelers” and it may consequently contribute to the CO2 emission reduction and energy conservation