

# **IMnI Panel Discussion**

**Modified and updated for WEB**

Electrolytic Manganese Dioxide

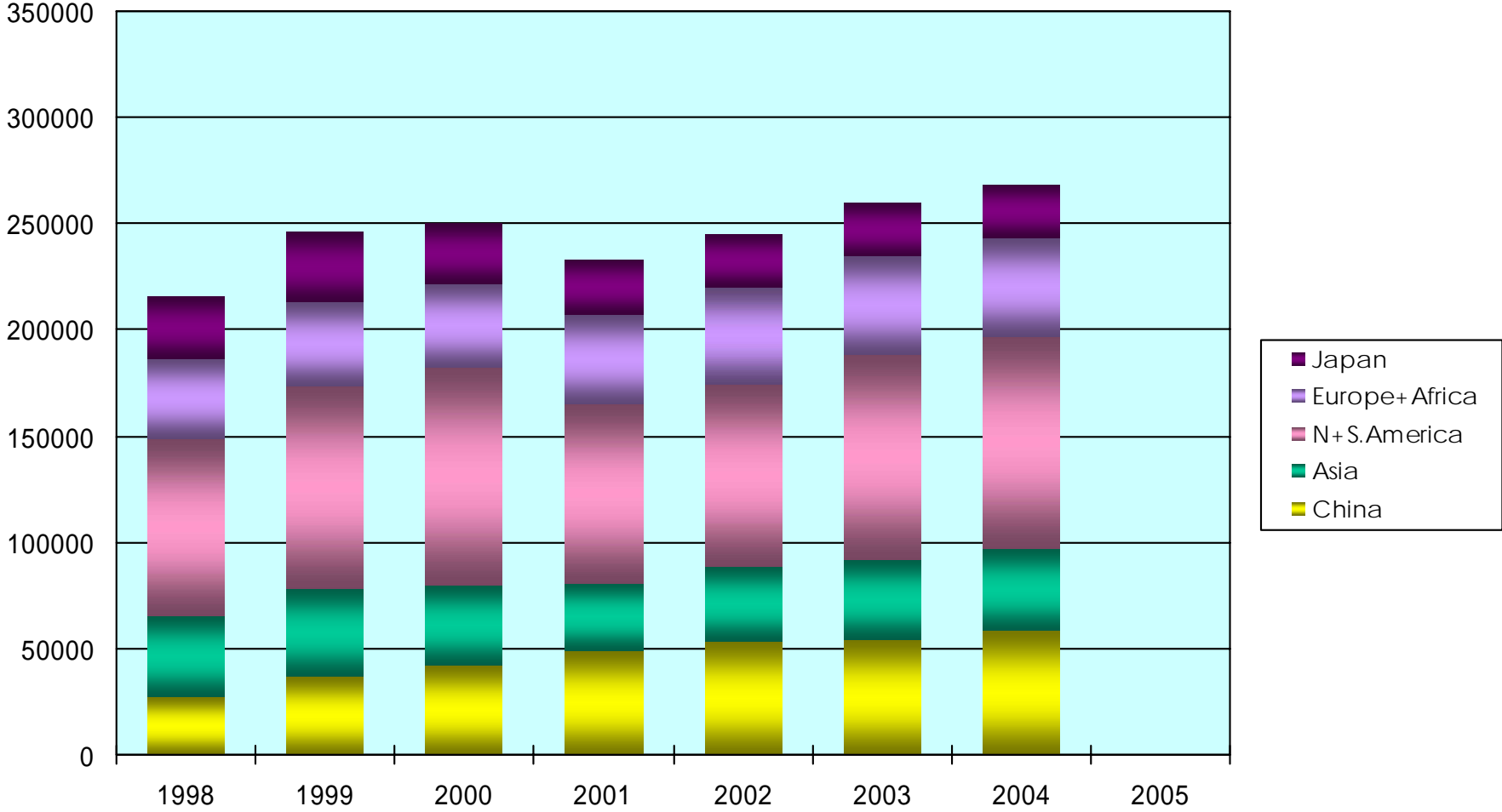
Tokyo, June 2, 2004

# Market Summary

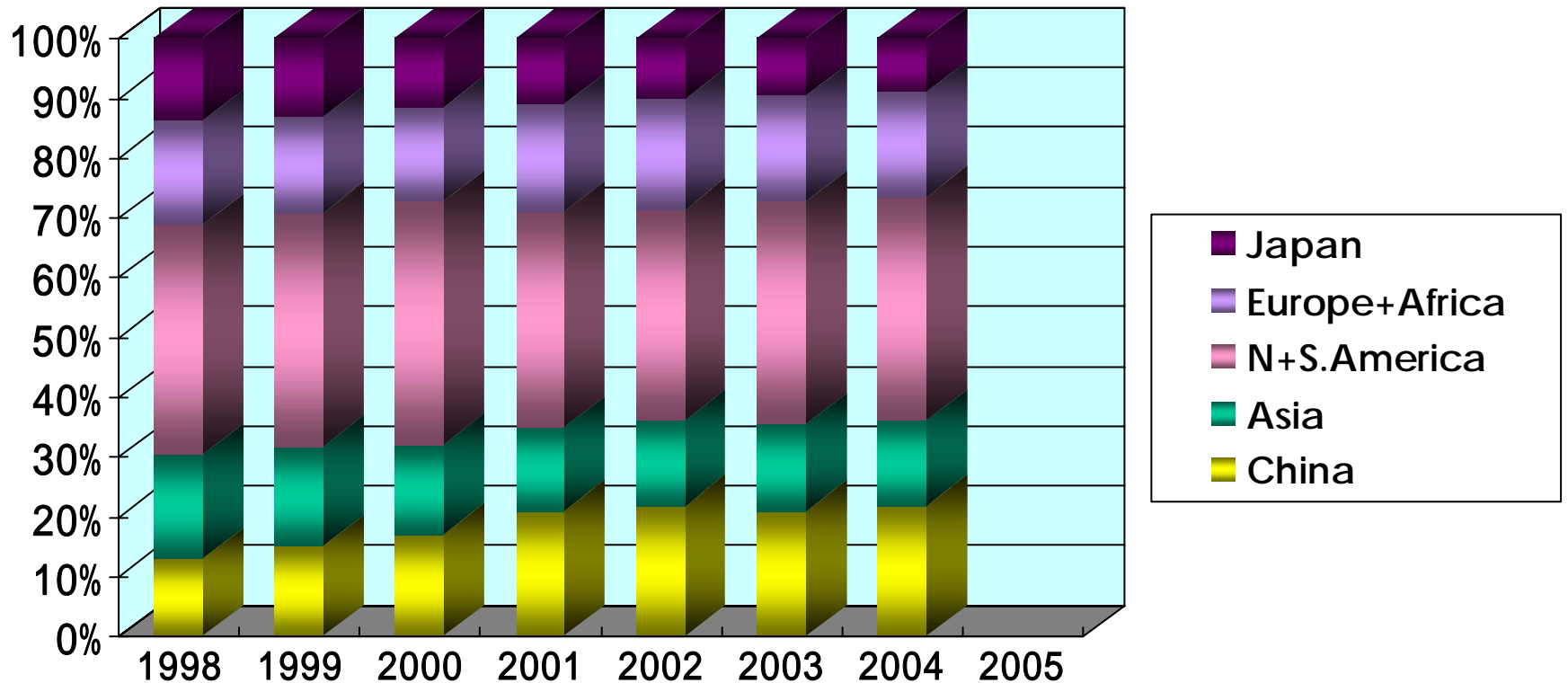
- Finally Battery market recovered from Y2K
- 9-11 and Iraq War pull the demand up
- Battery Makers are still active in M&A
- Japanese and some Asian Battery Makers shifted their production into China

# EMD Demand Migration

MT



# EMD Demand by Geography

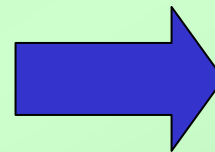


# Market Topics

- a US EMD manufacturer withdraw antidumping petition filing at DOC and ITC
- a US Battery company acquired Nanfu Battery
- another US Battery company acquired Baowang Battery
- 2 Japanese Battery manufacturers are ceased carbon zinc battery production in Japan
- Japanese Battery companies introduces new generation batteries

# EMD Name Plate Production Capacity estimate in 2005

<u>A</u>	<u>60,000 MT</u>
<u>B</u>	<u>53,000 MT</u>
<u>C</u>	<u>48,000 MT</u>
<u>D</u>	<u>29,000 MT</u>
<u>E</u>	<u>26,000 MT</u>
<u>F</u>	<u>23,000 MT</u>
<u>G</u>	<u>16,000 MT</u>
<u>H</u>	<u>11,000 MT</u>
<u>I</u>	<u>12,000 MT</u>
<u>J</u>	<u>10,000 MT</u>
<u>K</u>	<u>6,000 MT</u>
<u>Others</u>	<u>20,000 MT</u>

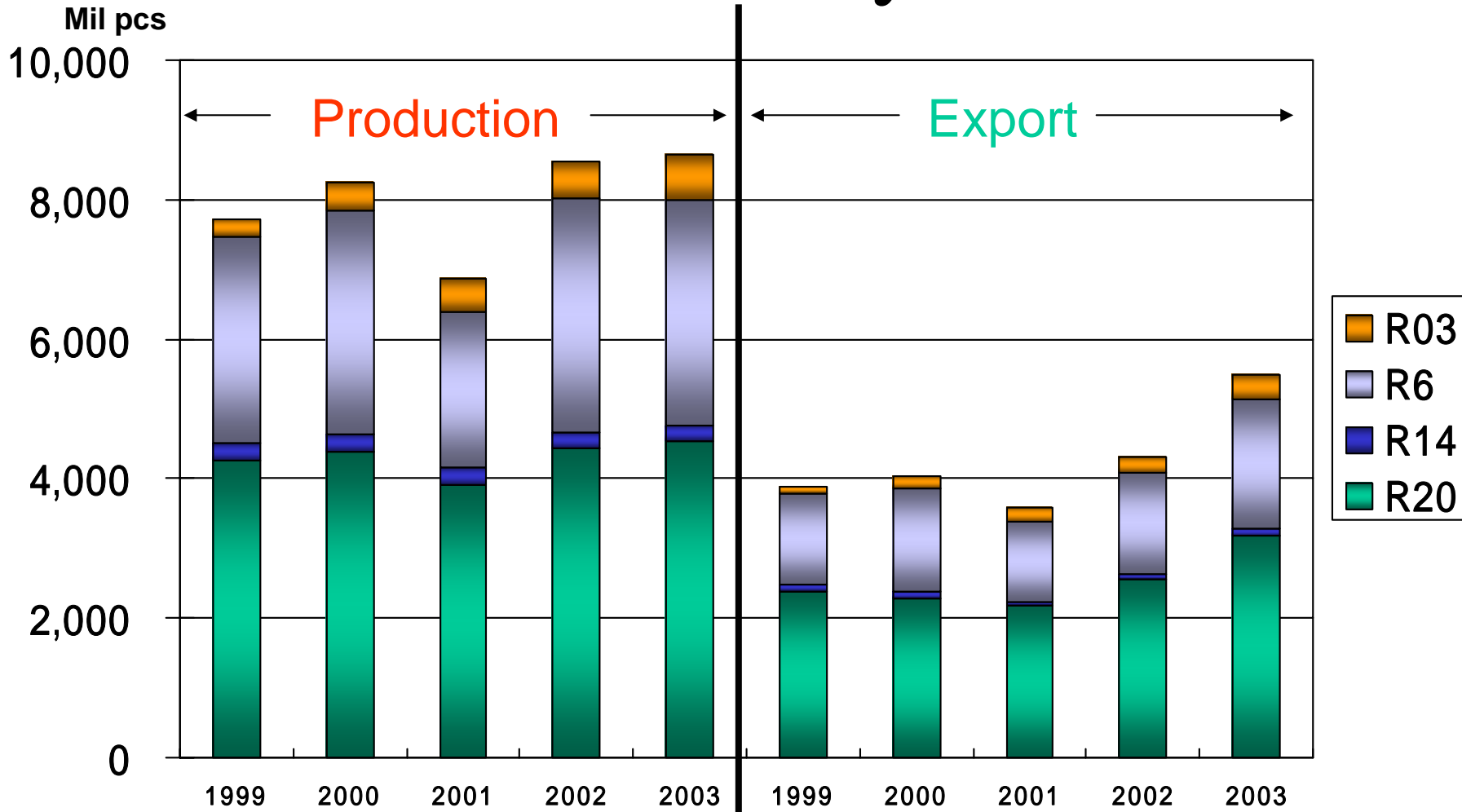


ca.314,000  
MT

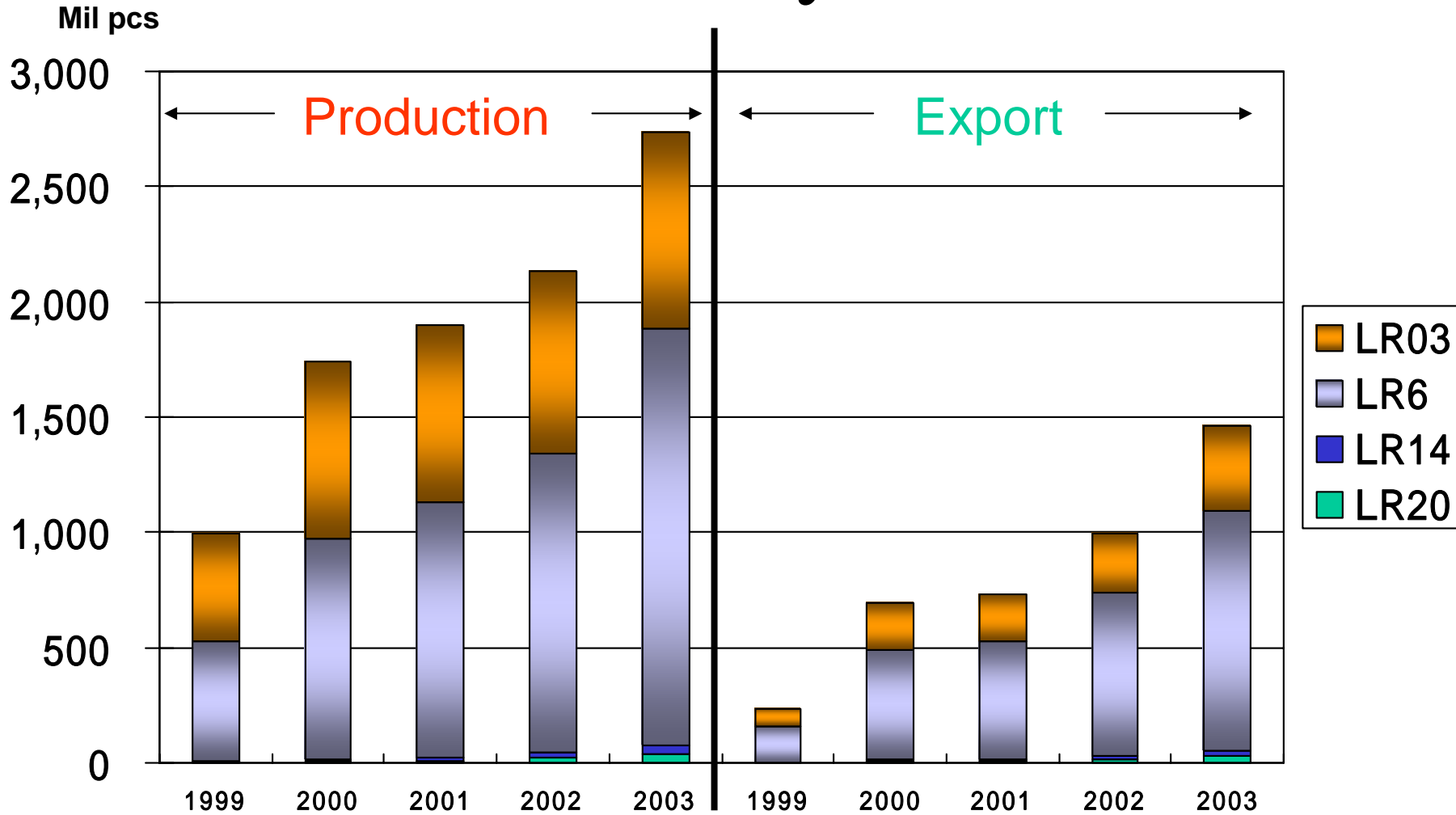
# Points for the discussion

- Battery demand continues to increase?
- China shift (battery production) is happening?
- How new batteries affect to future EMD demand?
- What is the newcomer's view and plan?

# Zinc Carbon Battery in China



# Alkaline Battery in China



# New Generation Batteries

- New Battery from a Japanese company
- The company announced that this new battery might substitute for Alkaline batteries
- Higher Power & Longer life



# EMD in New Battery

## Ni-Mn Dry Cell Battery



# EMD in New Battery

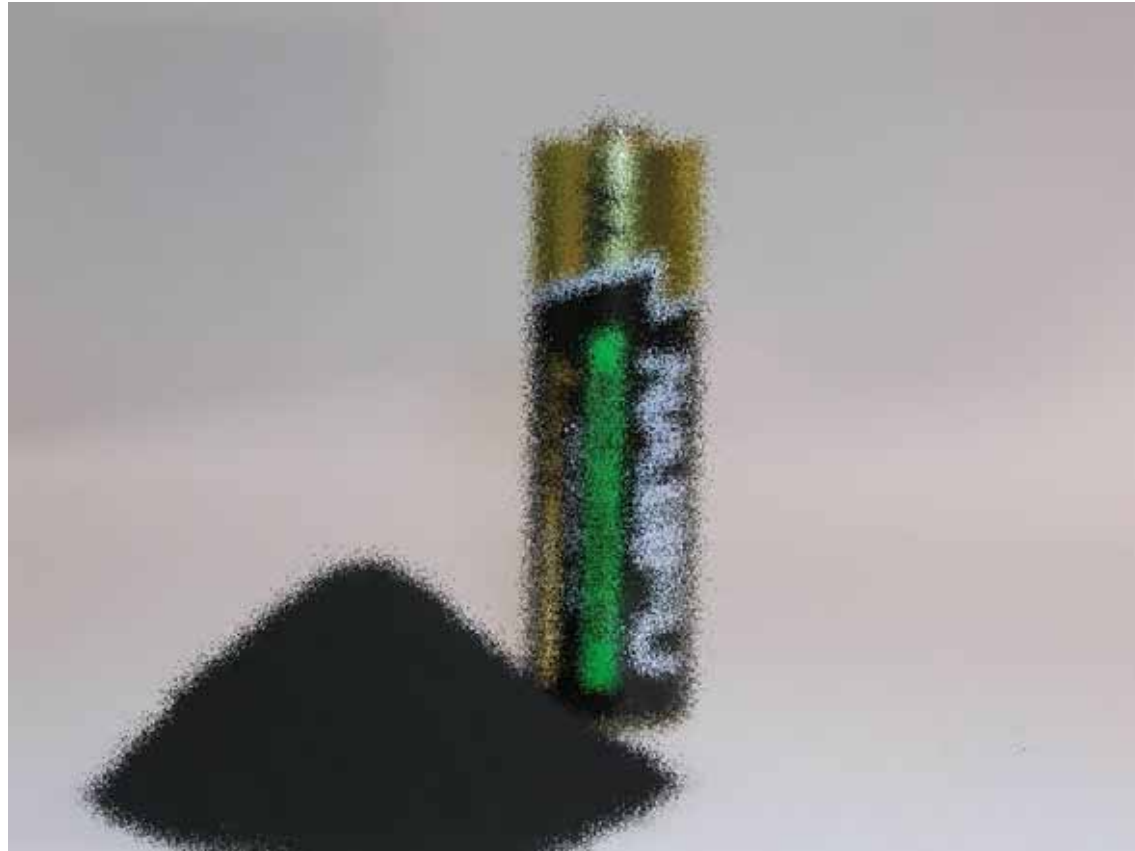
## Ni Dry Cell Battery



# EMD in Zinc Carbon Battery



# EMD in Alkaline Battery



# Batteries use less EMD ?



# New Application needs which battery?

- Digital Camera
- LED flash light

# EMD Demand Forecast

