



# MARINE CORPS SYSTEMS COMMAND

*EQUIPPING THE WARFIGHTER TO WIN*

## ***2010 Combat Vehicle Conference “Defining an Integrated, Networked Ground Combat Force for the Next Decade”***



***Equipping Warfighters to Win***

Brigadier General Frank L. Kelley Commander  
Marine Corps Systems Command  
9 Nov 2010



# MARINE CORPS SYSTEMS COMMAND

**EQUIPPING THE WARFIGHTER TO WIN**

## Mission

Overview

Vehicles

Power

Road Ahead



Mission: To serve as the Commandant's agent for acquisition and sustainment of systems and equipment used to accomplish the Marine Corps' warfighting mission

**We will equip and sustain the Nation's expeditionary "Force of Choice" (MCVS 2025)**



Overview

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▶ We will continue to provide the best trained and equipped Marine units to Afghanistan. This will not change. This remains our top priority!

▶ We will rebalance our Corps, posture it for the future and aggressively experiment with and implement new capabilities and organizations.

▶ We will better educate and train our Marines to succeed in distributed operations and increasingly complex environments.

▶ We will keep faith with our Marines, our Sailors and our families.





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What the USMC does not need.

Overview

**Vehicles**

Power

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There is a reason why we flew the A-4M, AV-8B and will fly the JSF.

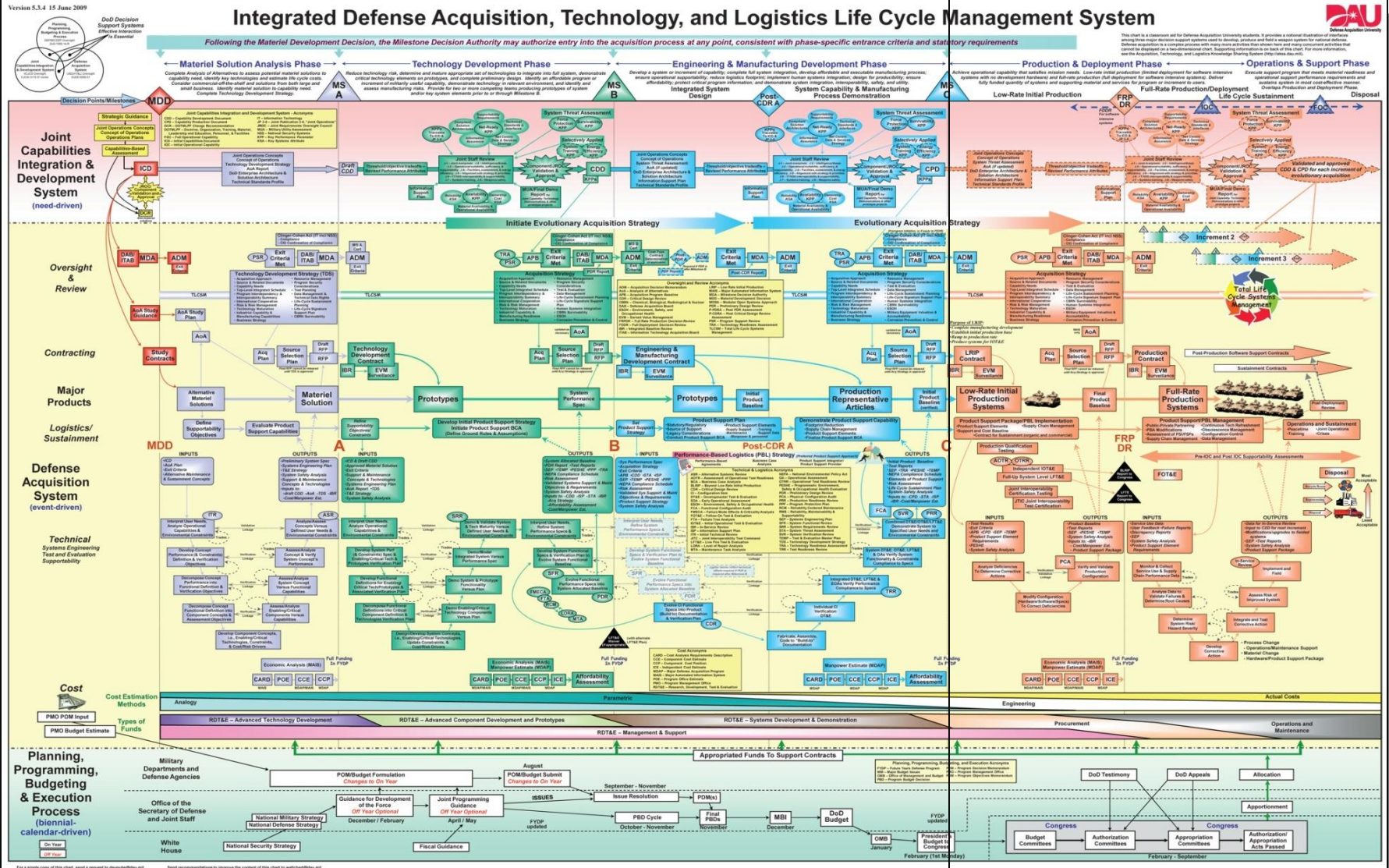




# MARINE CORPS SYSTEMS COMMAND

## EQUIPPING THE WARFIGHTER TO WIN

# Begin with the End in Mind







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# Begin with the End in Mind

Strategy

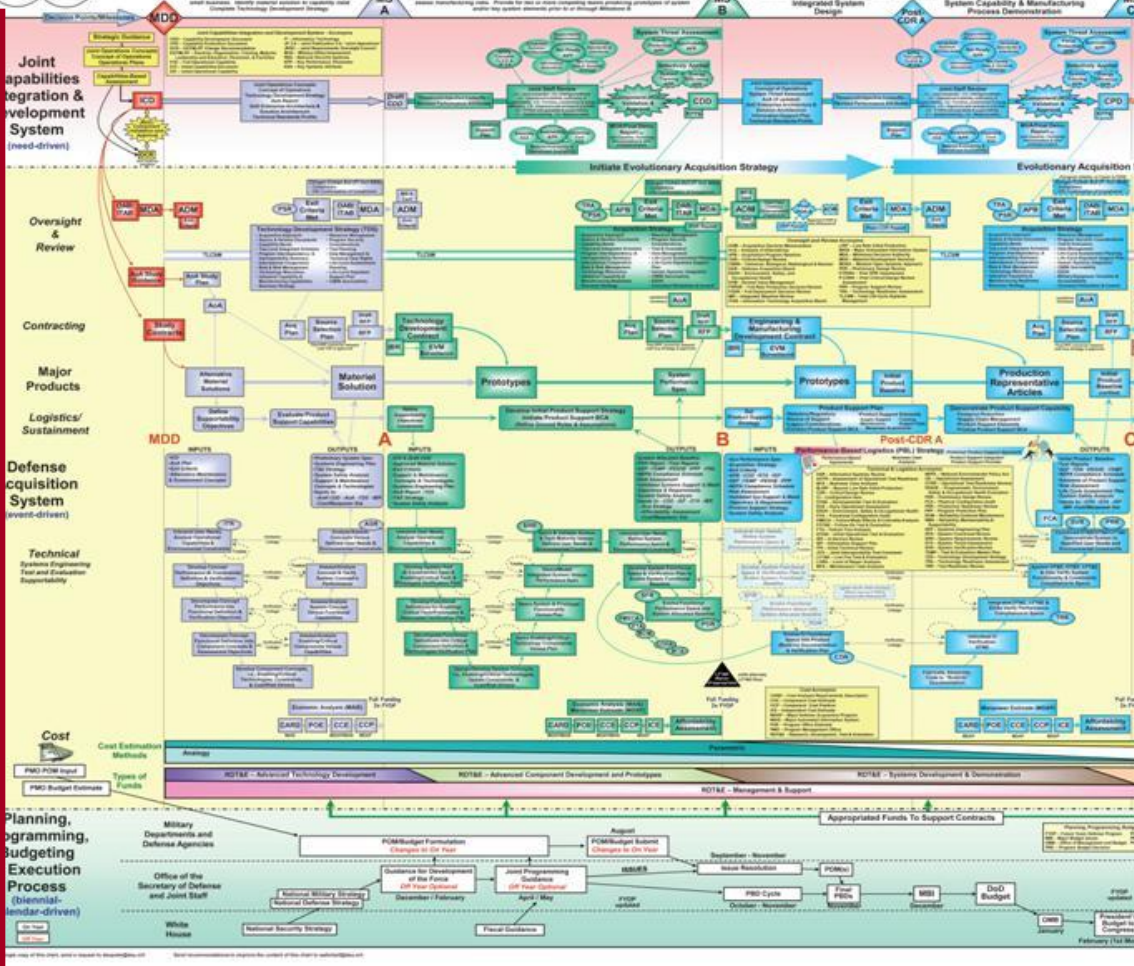
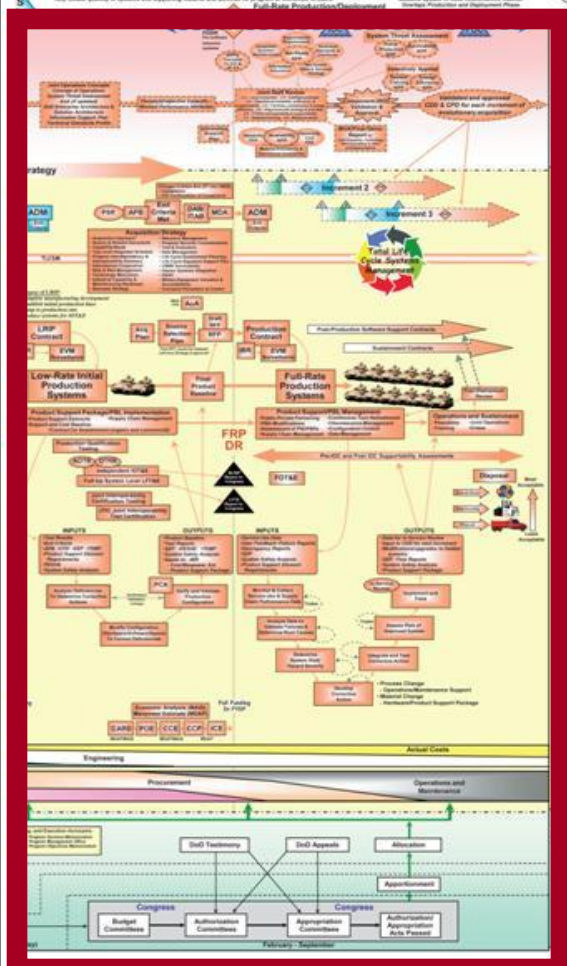
Acquisition

Funding

Road Ahead

### Integrated Defense Acquisition, Technology, and Logistics Life Cycle Management System

Following the Material Development Decision, the Milestone Decision Authority may authorize entry into the acquisition process at any point, consistent with phase-specific entrance criteria and statutory requirements



SUSTAINMENT



- We must provide the nation the **BEST VALUE** in terms of vehicle capabilities.
- Requirements must be managed more closely...procurement cost will be a systems attribute.
- Operating and maintenance cost will be a system attribute.
- USMC vehicles have grown too heavy; we need to re-emphasize our mission requirements for amphibious and expeditionary operations.
  - We must limit vehicle weights for Navy Amphibious Ships.
- Vehicles need to be multi-capable, share common components, training and sustainment capabilities.

**Expeditionary vehicles are maneuverable, capable, lethal and reliable.**





## Joint Lightweight Tactical Vehicle (JLTV)

1. Has KSA for fuel efficiency
2. Will address KSA in construct of Fully Burdened Cost of Fuel (FBCF) on the battlefield (FBC)



### Fully Burdened Cost of Fuel (FBCF)

- Cost of fuel; in addition to commodity costs, includes all costs up to the point of sale to include cost of product, transportation, intermediate storage and distribution facilities, maintenance and upkeep costs, DESC labor and overhead costs, etc..
- Cost of logistics tail; includes fuel delivery asset operations and support cost, fuel delivery asset depreciation cost, direct and indirect fuel infrastructure costs, environmental costs, and other unique costs
- Cost of force protection which includes the resources necessary to secure fuel delivery

Defense Energy Support Center (DESC) , ,  
Defense Logistics Agency (DLA)

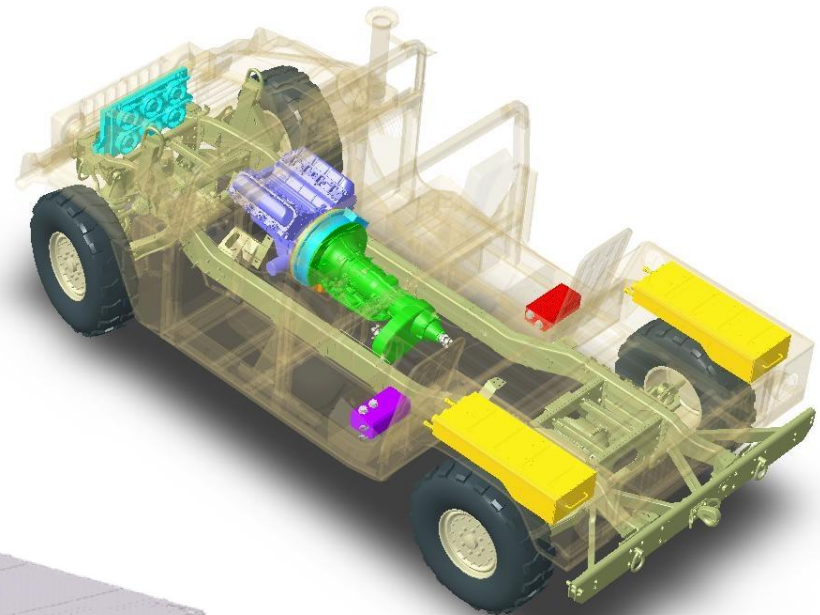
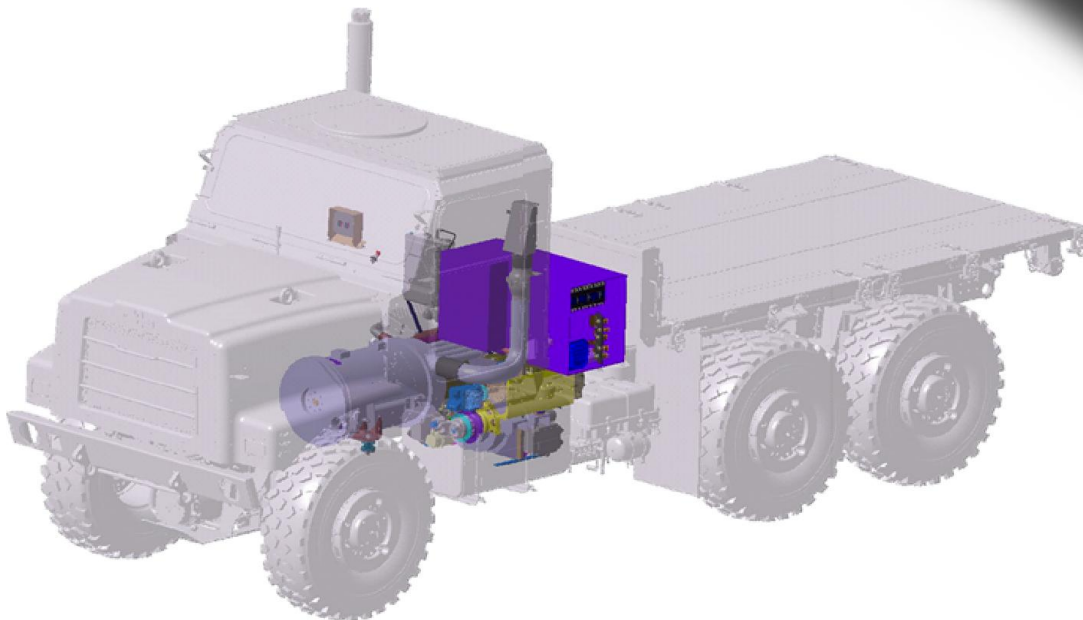
3. Fuel efficiency adjusted for MPG and Weight - addressed as Ton-Miles per Gallon





## On-Board Vehicle Power (OBVP) Systems

Fuel efficiency and on-board vehicle power will help lighten the load on carrying fuel resupply to the ExFOBs.





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## Ground Renewable Expeditionary Energy Networks (GREEN)

Overview

Vehicles

**Power**

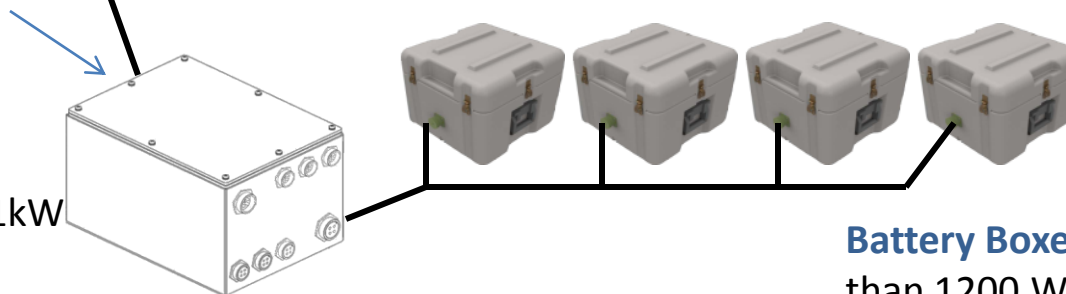
Road Ahead

**Solar panels:** 8 total, 205W each, 2 per container. Each half container (w/ panel) is 2 man lift.



**GREENS controller:**  
4x Solar inputs  
4x Battery connections  
1x AC input  
1x DC input

28 VDC output  
300W continuous, 1kW peak.



**Battery Boxes:** 4 total, each more than 1200 Whr, Each battery box is a 2 man lift. Current design uses Lithium ion for increased life and energy density over LeadAcid

**GREENS controller takes power from solar input, supplies load and send remaining to charge batteries. Batteries supply power during the night. Total energy per day 7200 Whr (300W 24/7)**



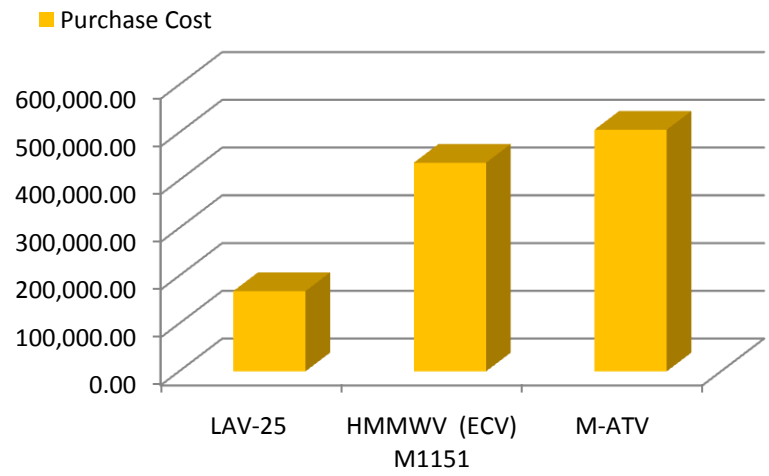


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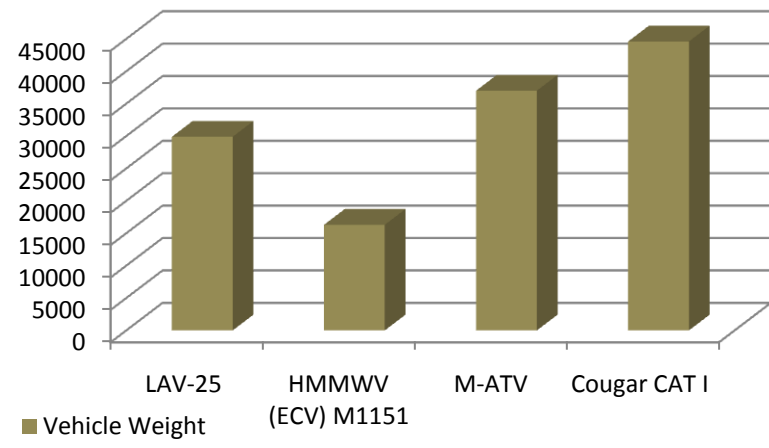
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The Nation needs the "best value"

## Purchase Cost



## Vehicle Weight



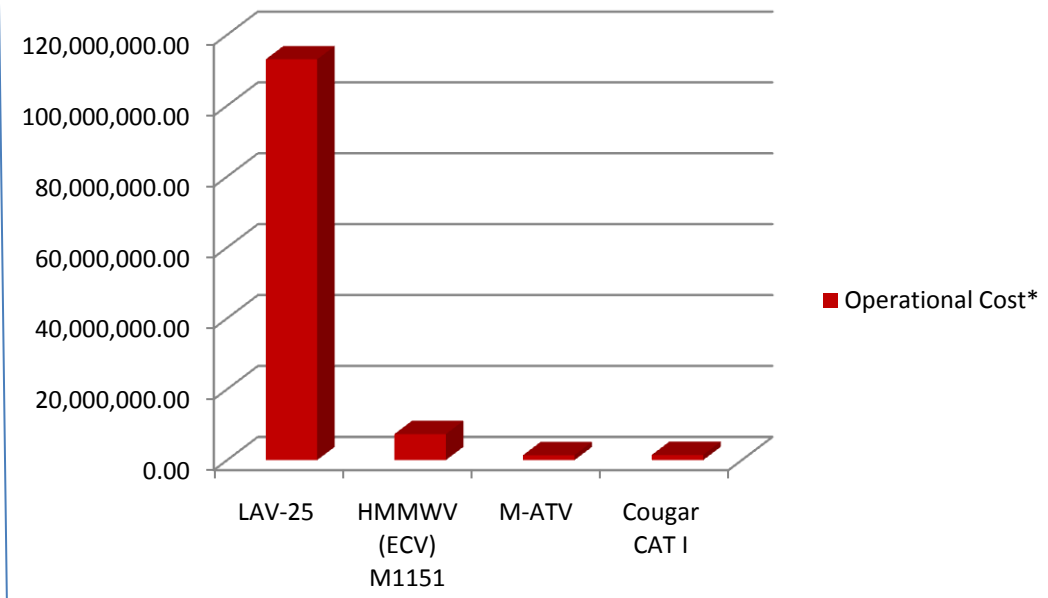
Overview

**Vehicles**

Power

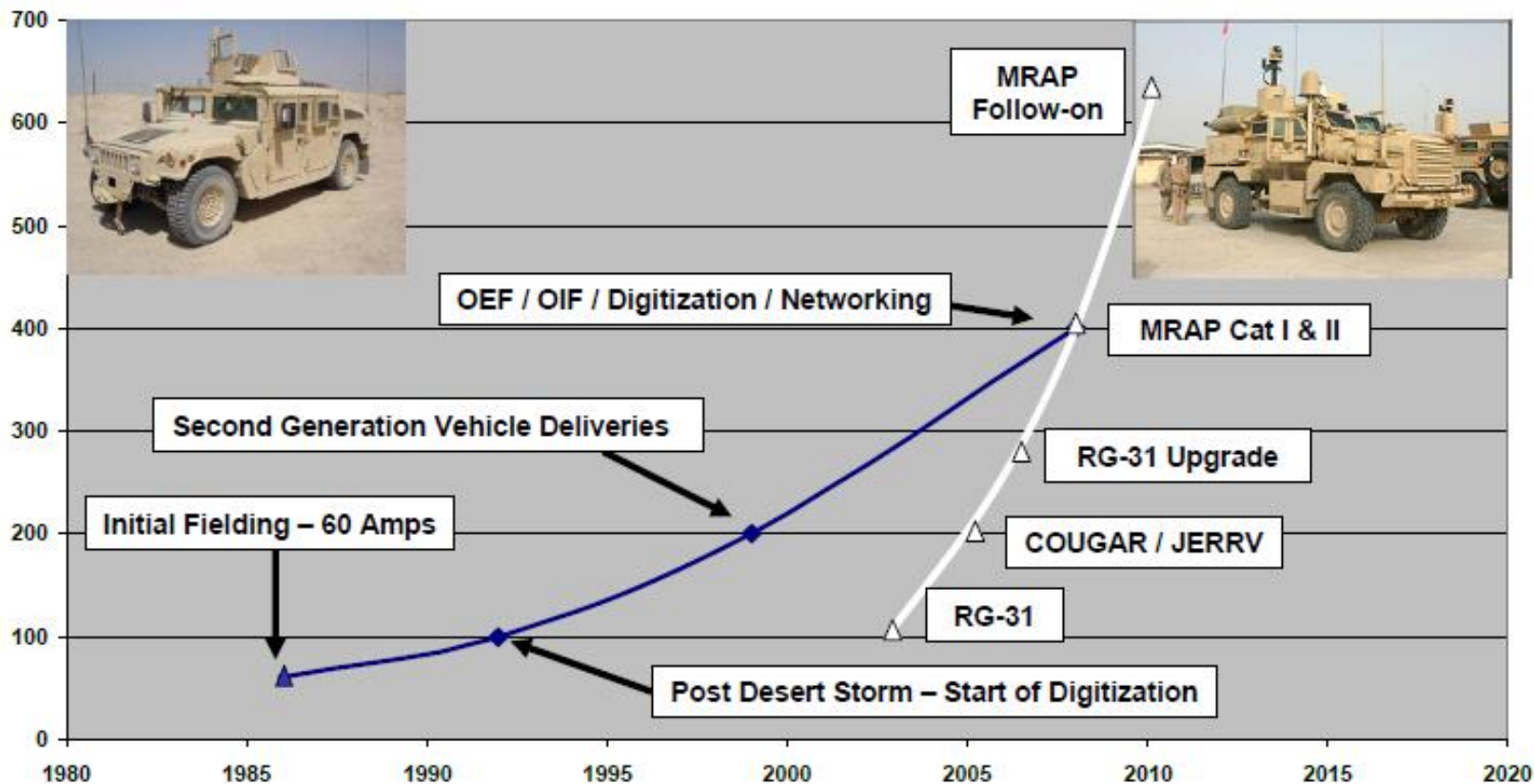
Road Ahead

## Operational Cost\*





### Alternator Amperage Rating on HMMWV / MRAP at 28 VDC



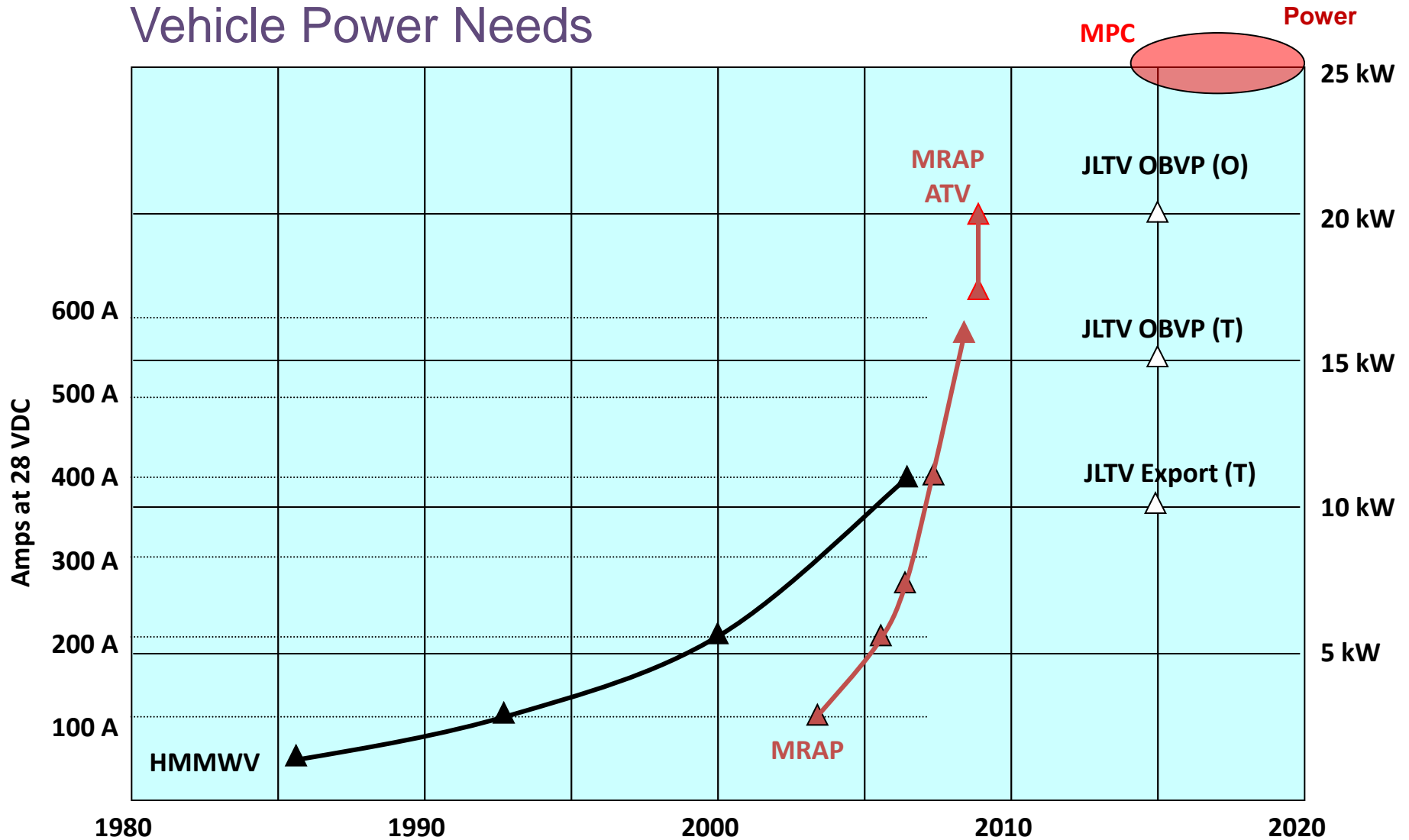




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## Vehicle Power Needs

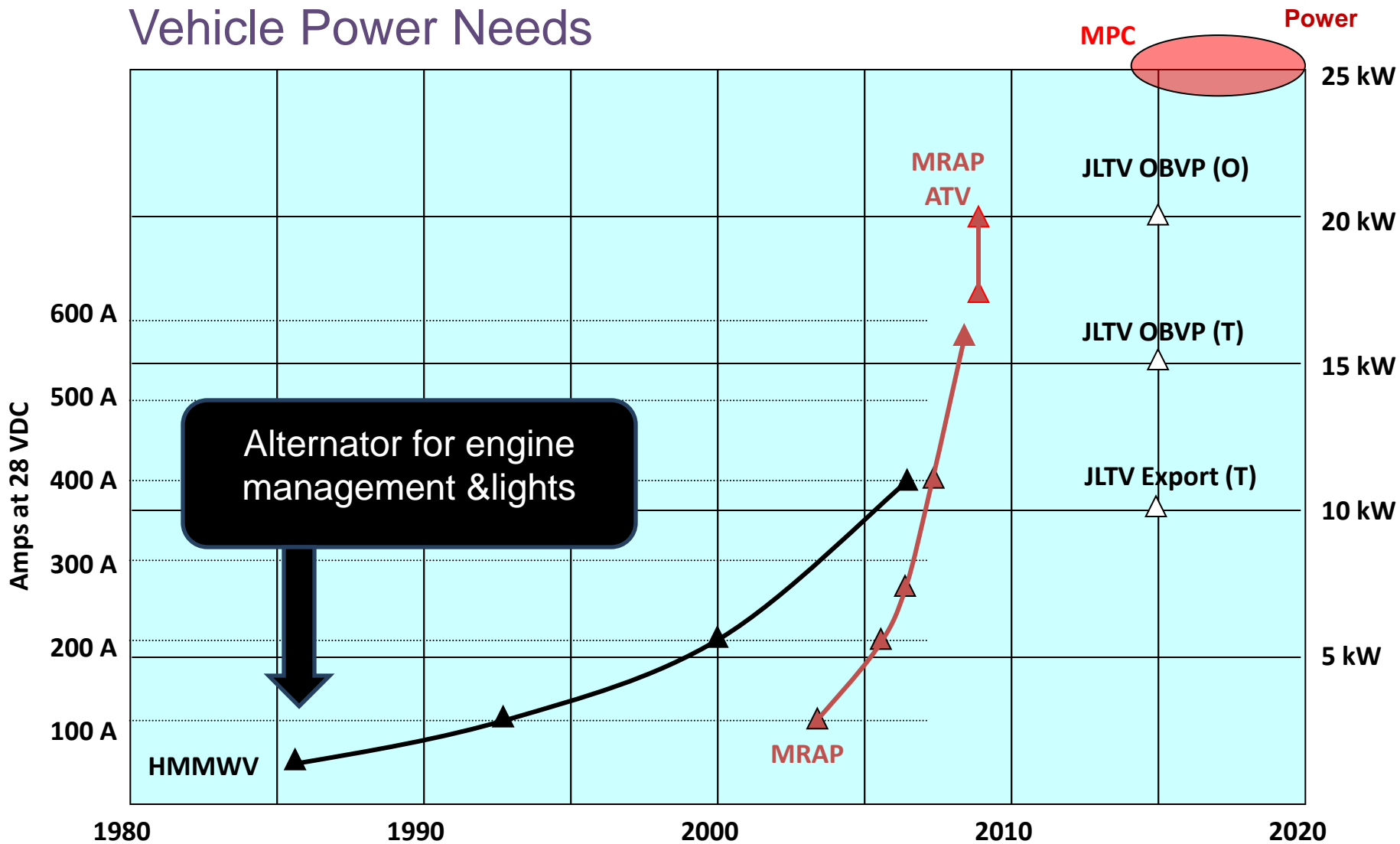




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## Vehicle Power Needs



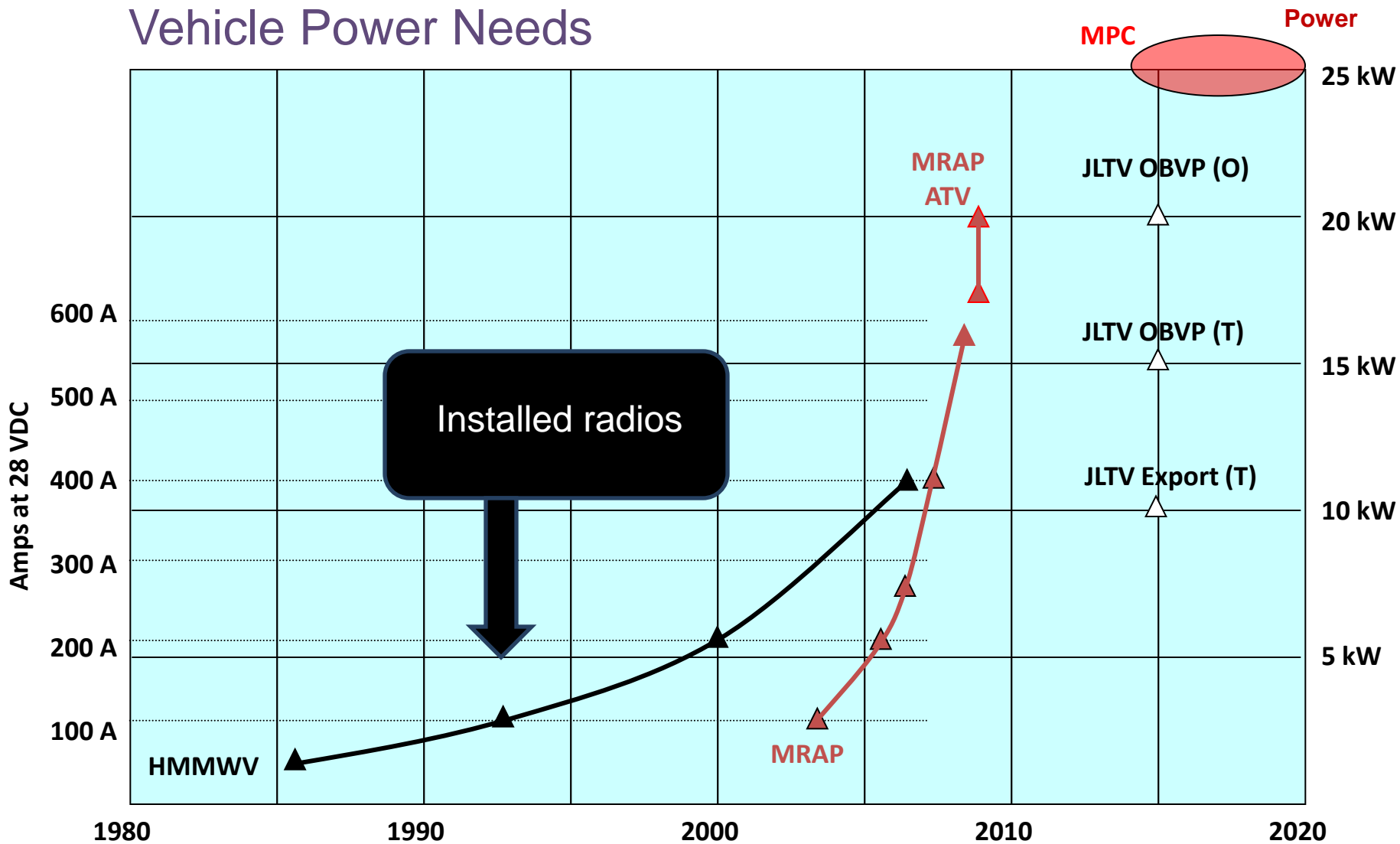




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## Vehicle Power Needs

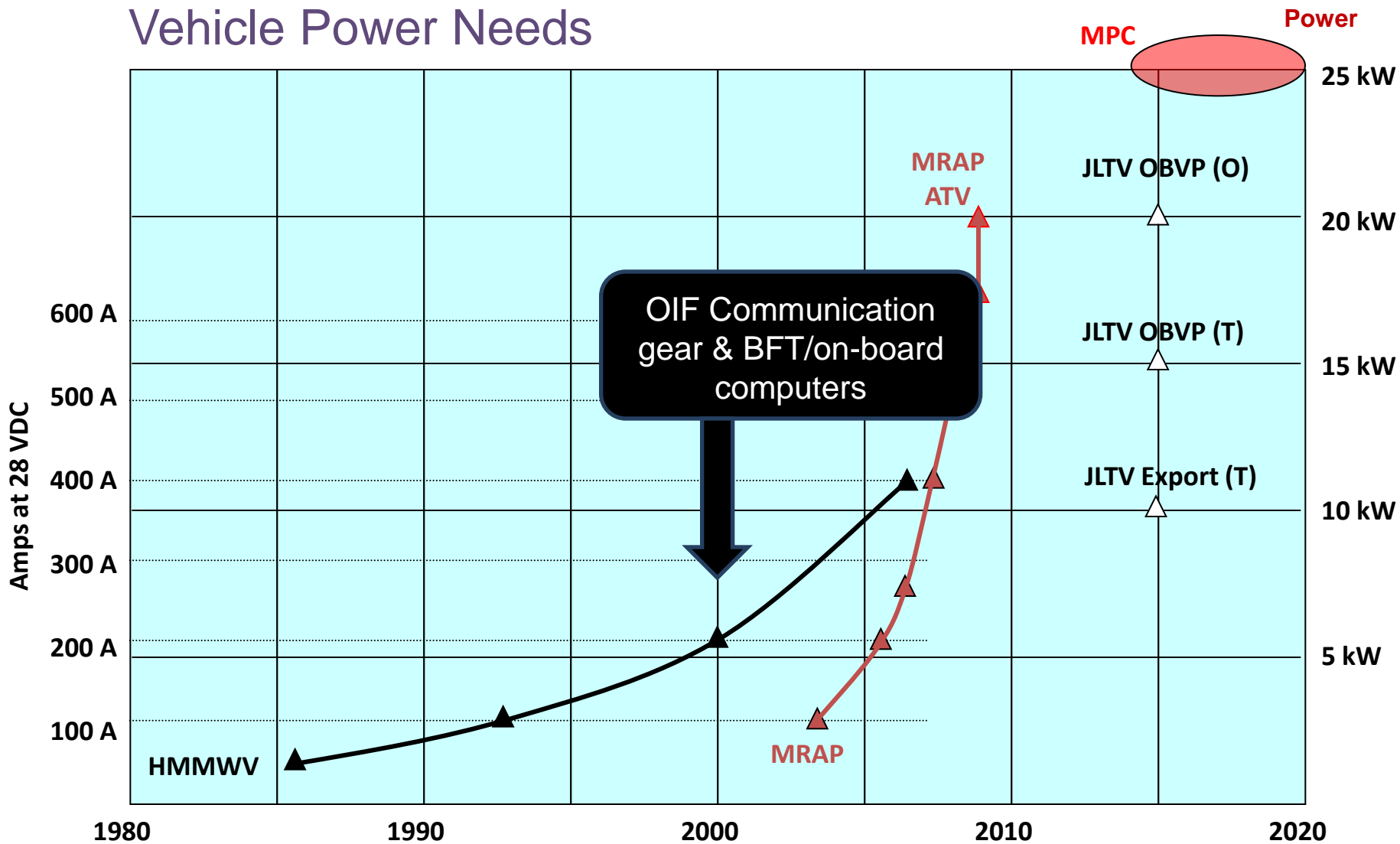




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## Vehicle Power Needs

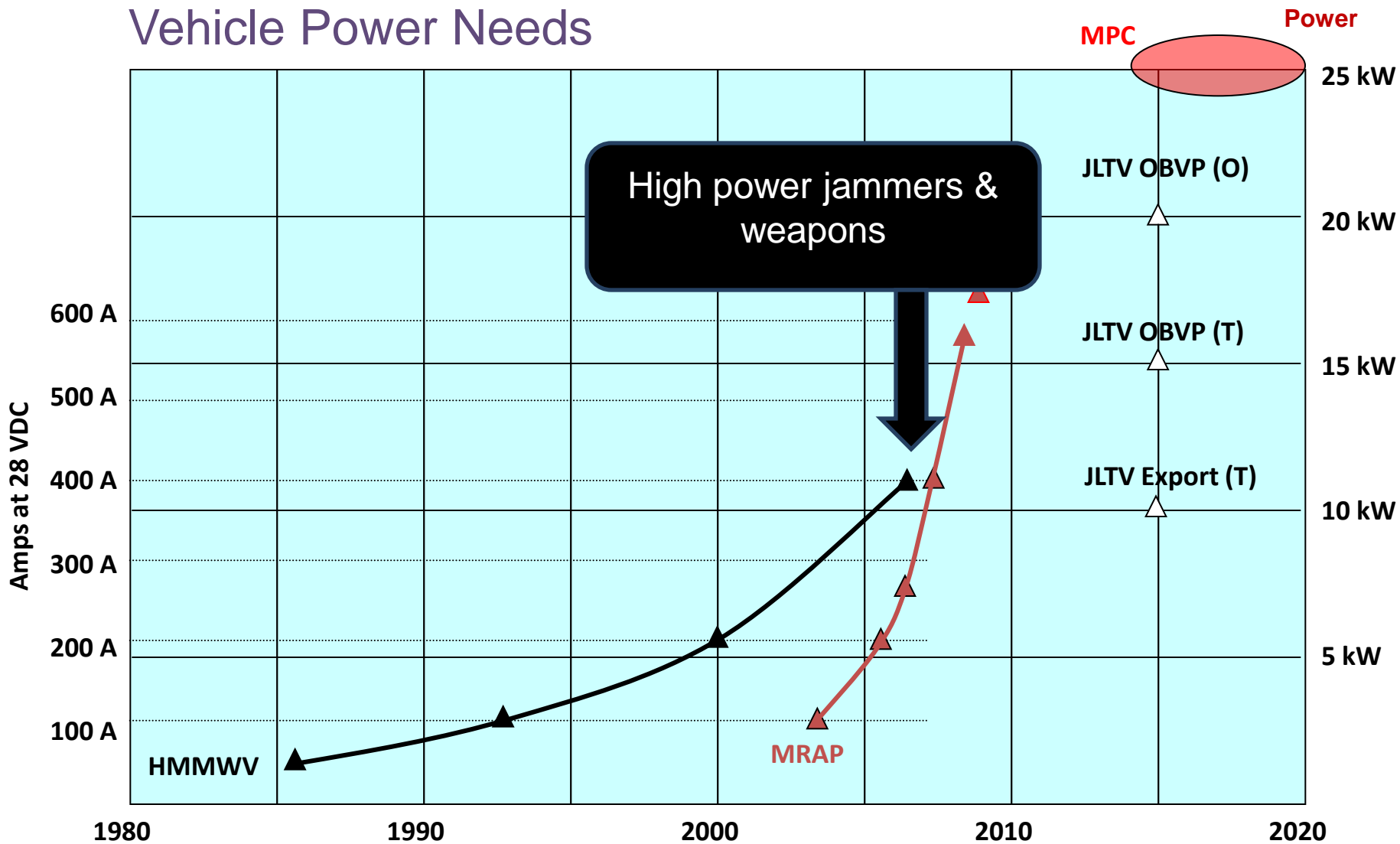




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## Vehicle Power Needs



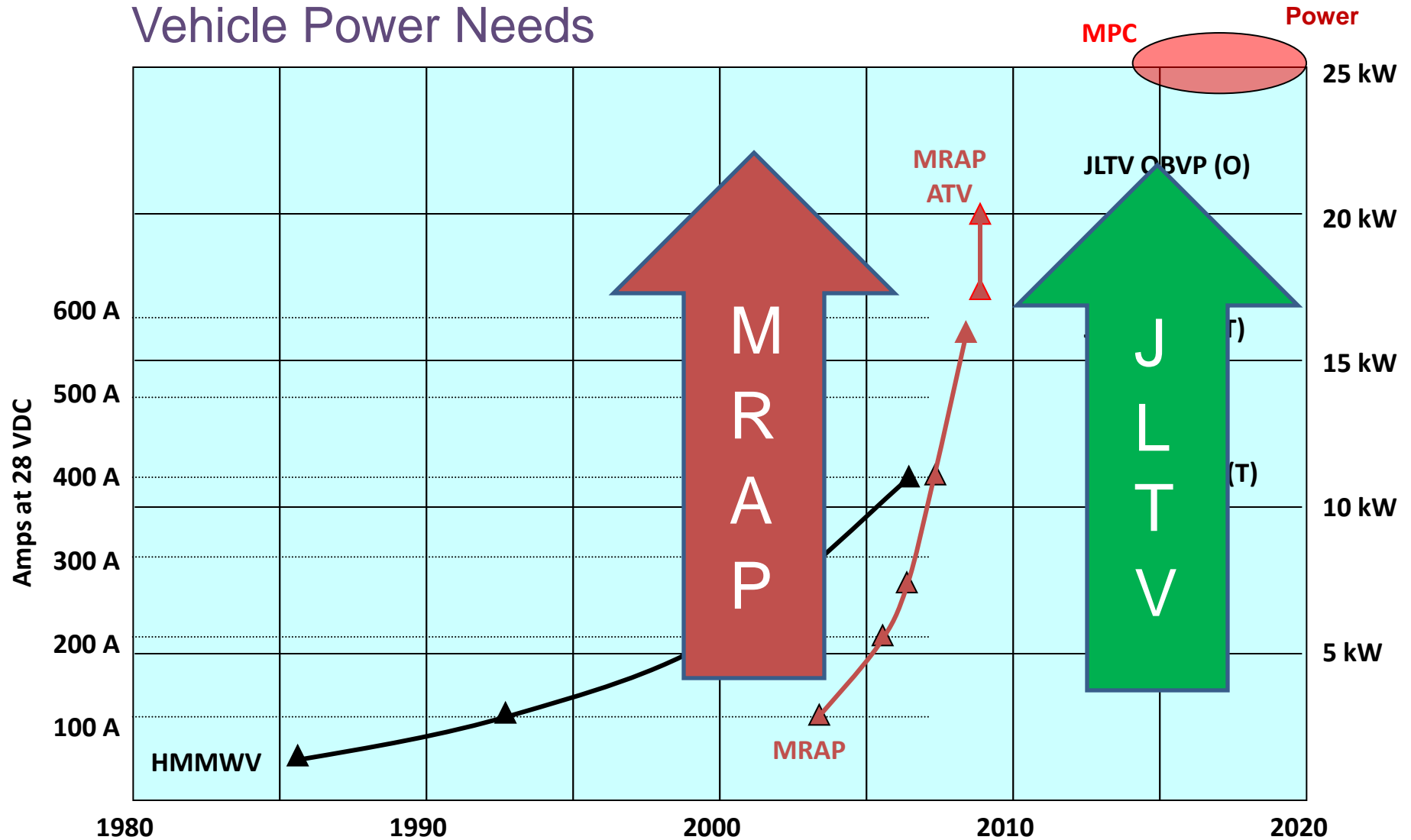




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## Vehicle Power Needs





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## “Connected Vehicles”







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## Questions

