

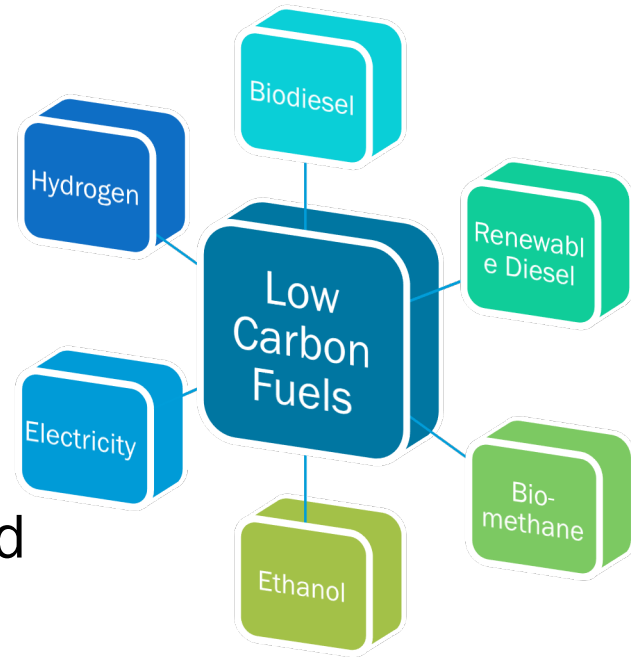
Low Carbon Fuel Standard for ZEV Transit Agencies



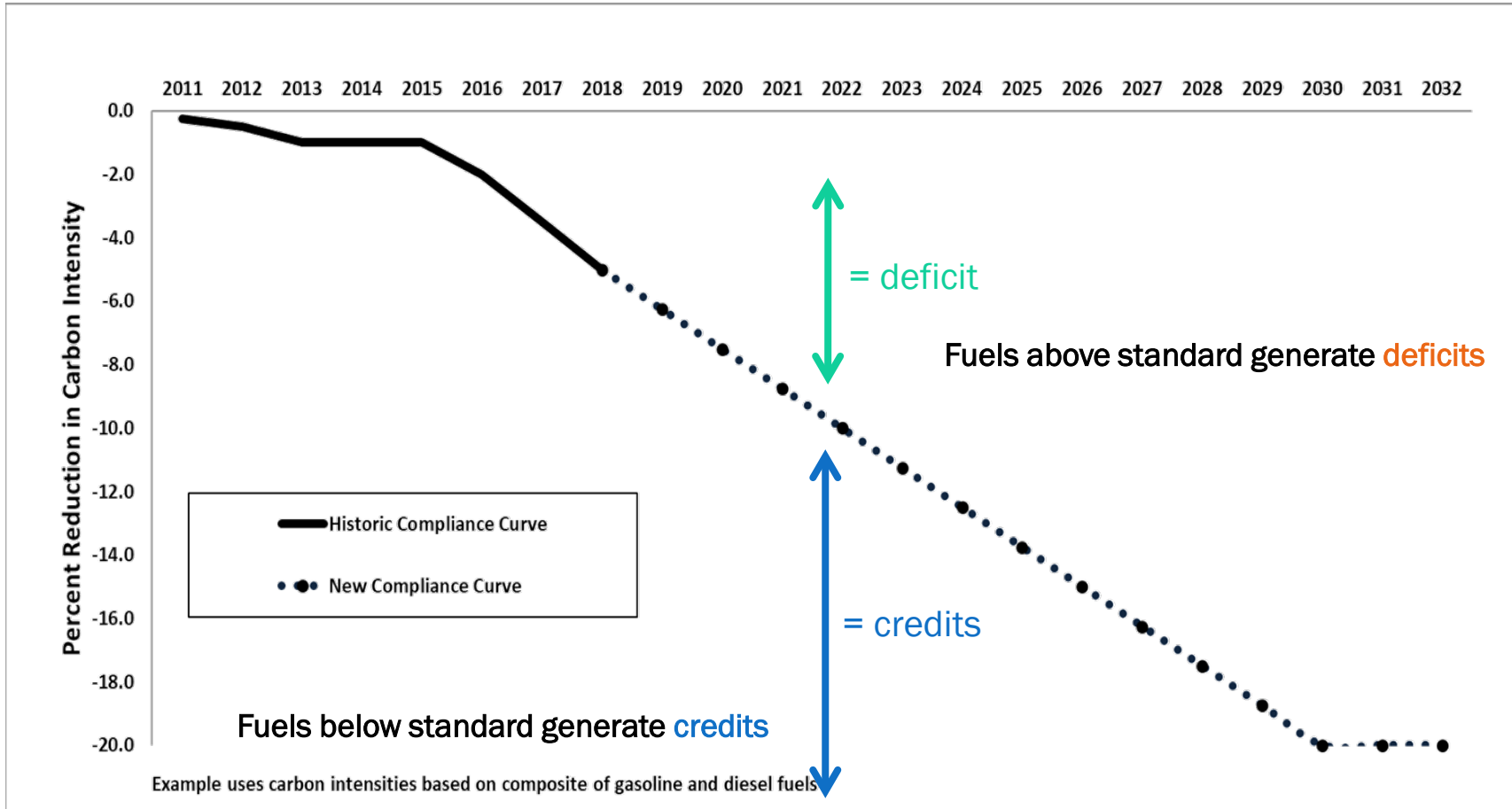
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LCFS History

- Key Milestones:
 - Original adoption in 2009, amended in 2011, re-adopted in 2015, amended in 2018
- Goal: Reduce carbon intensity (CI) of transportation fuel pool by at least 20% by 2030
- Expected benefits:
 - Complement other AB 32 measures
 - Transform and diversify fuel pool
 - Reduce petroleum dependency
 - Reduce emissions of other air pollutants

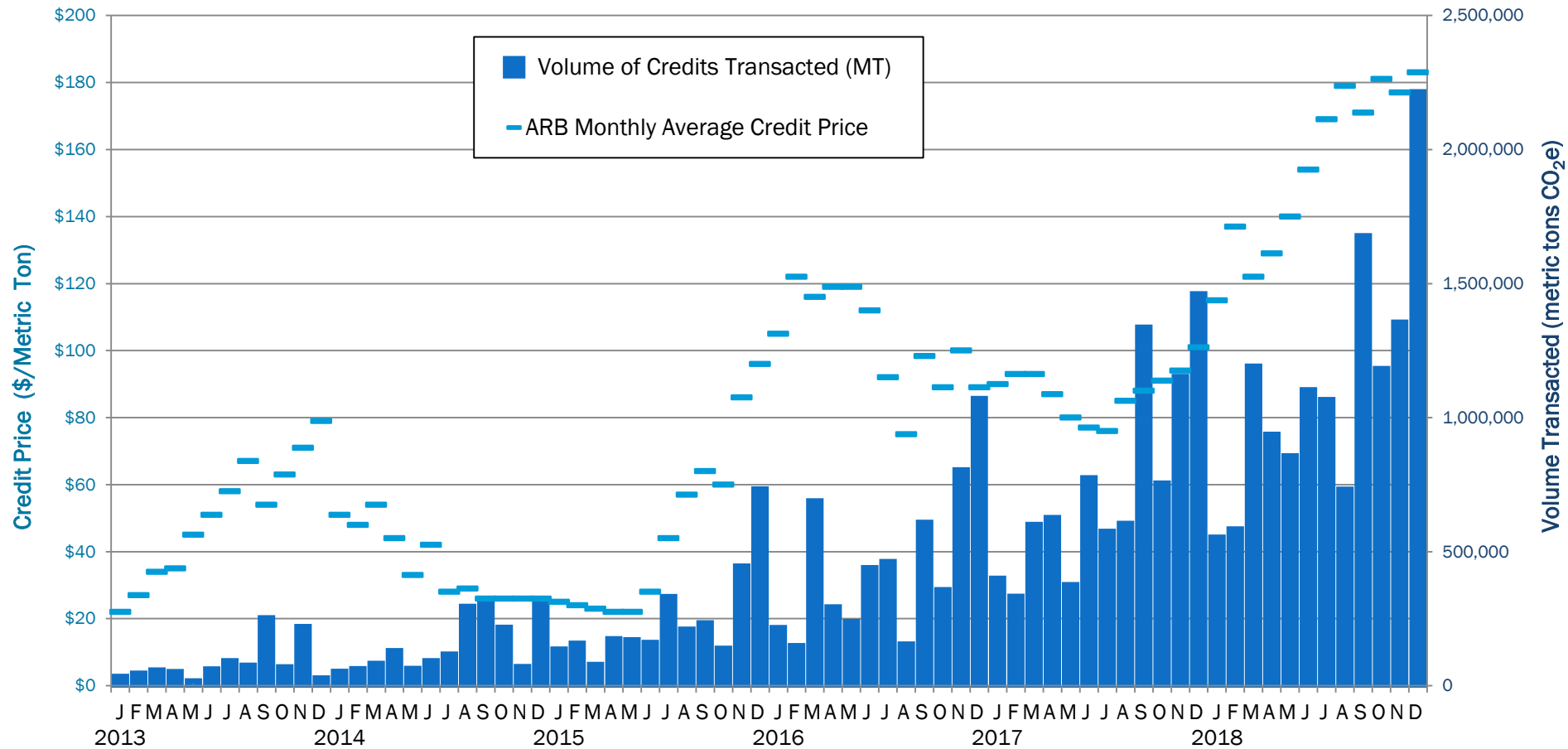


How does LCFS work?



- Fuels above standard generate **deficits**
- Fuels below standard generate **credits**

LCFS Credit Price and Volume Trend



Transit Agencies are Credit Generators

- Transit agencies with electric buses, can opt-into LCFS, and **generate credits**
- Starting 2019, transit agencies that own hydrogen fueling infrastructure can also generate credits
- Credits generated do not expire and can be traded in the LCFS market

Approximate Credit Revenue for Transit Buses in 2019

Bus Fuel Type	Example CI* (gCO ₂ e/ MJ)	Fuel Efficiency		Credit Revenue Per Mile (LCFS credit value \$200)	Annual Credit Value (based on an annual mileage of 40,000)
Electric Bus using grid electricity	95	0.5	mile/kWh	\$0.54	\$21,649
Electric Bus using on-site solar electricity	0	0.5	mile/kWh	\$0.68	\$27,121
Fuel Cell Bus using hydrogen from generic Lookup Table Pathway	120	6.5	mile/kg	\$0.22	\$8,702
Fuel Cell Bus using hydrogen from electrolysis through zero-CI electricity	10	6.5	mile/kg	\$0.62	\$24,949

* CIs shown here are for illustration only, subject to changes.

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