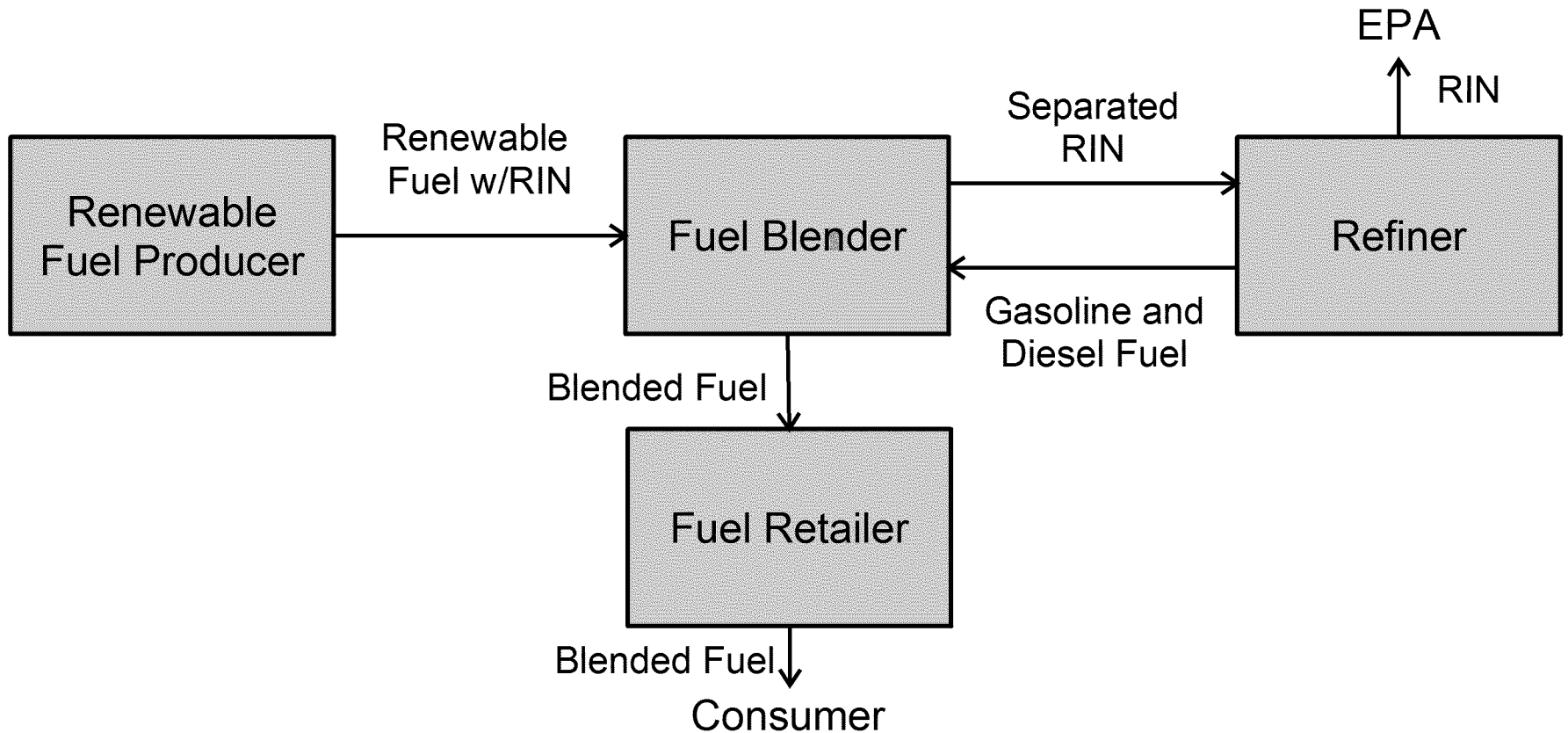


RIN Demand

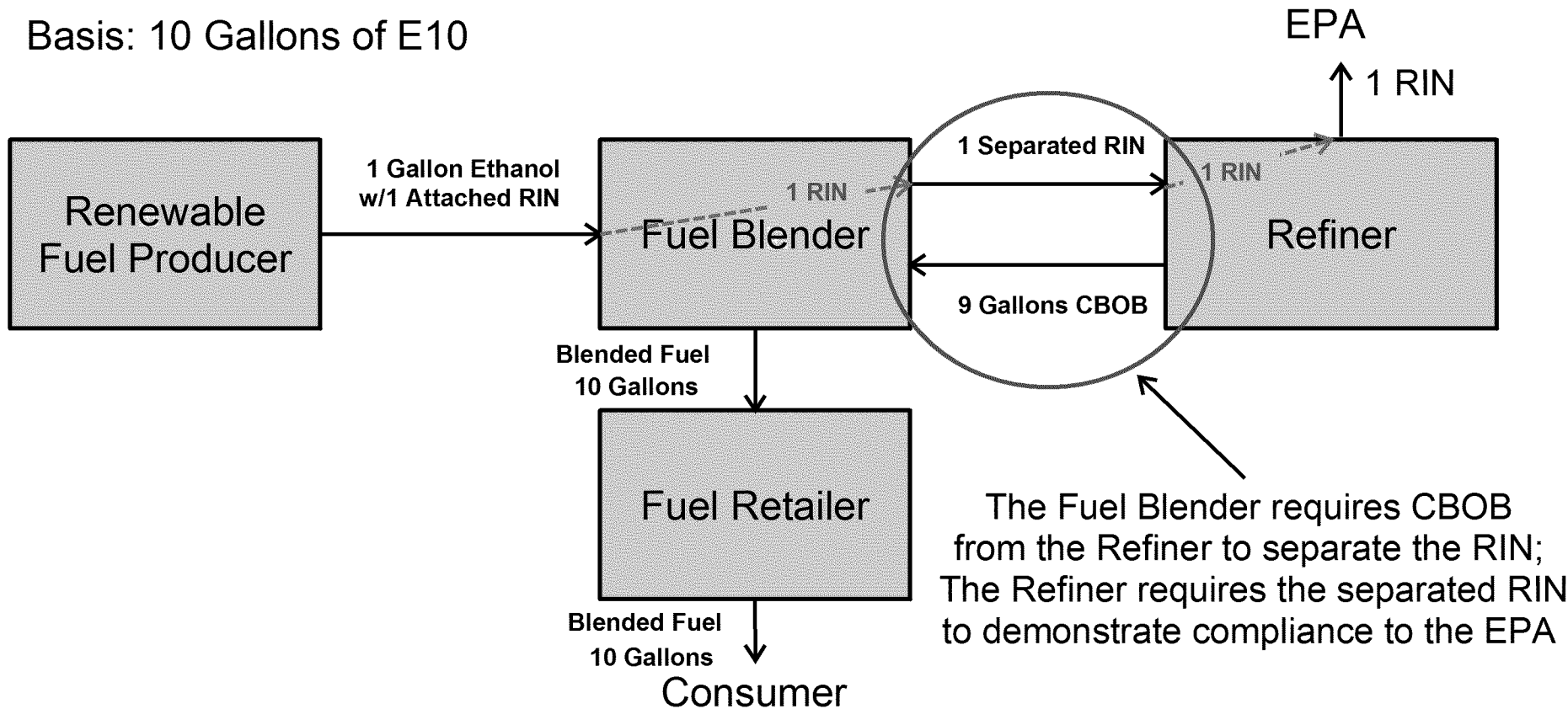
Refiner as Obligated Party



The EPA demands RINs from the Refiner which creates the demand for renewable fuel blending

Physical RIN/Fuel Flow *Refiner as Obligated Party*

Basis: 10 Gallons of E10

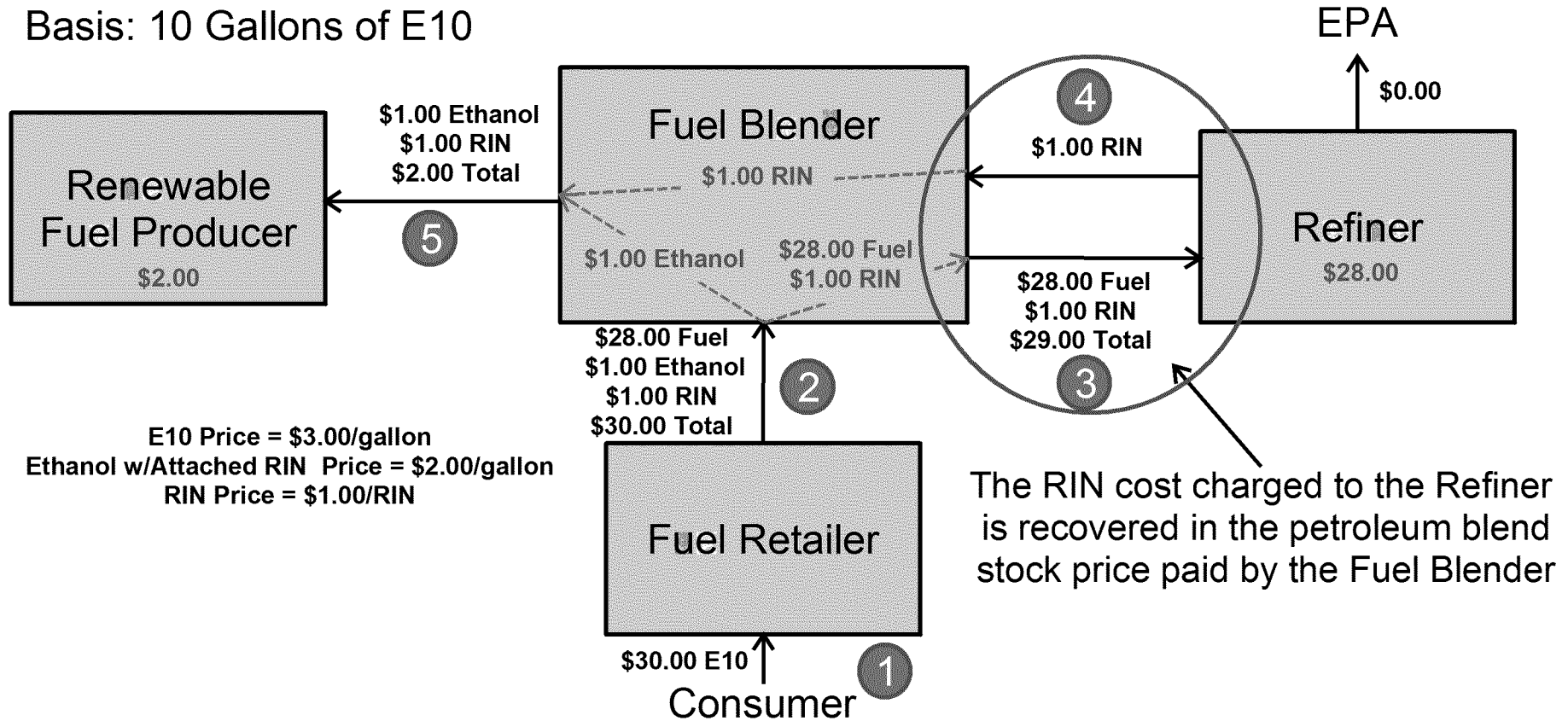


RIN flow connects the Renewable Fuel Producer, the Fuel Blender, and the Refiner to the EPA

RIN Value Flow

Refiner as Obligated Party

Basis: 10 Gallons of E10



The Consumer pays for the RIN value which then passes through the Fuel Blender and Refiner to ultimately subsidize the Renewable Fuel Producer

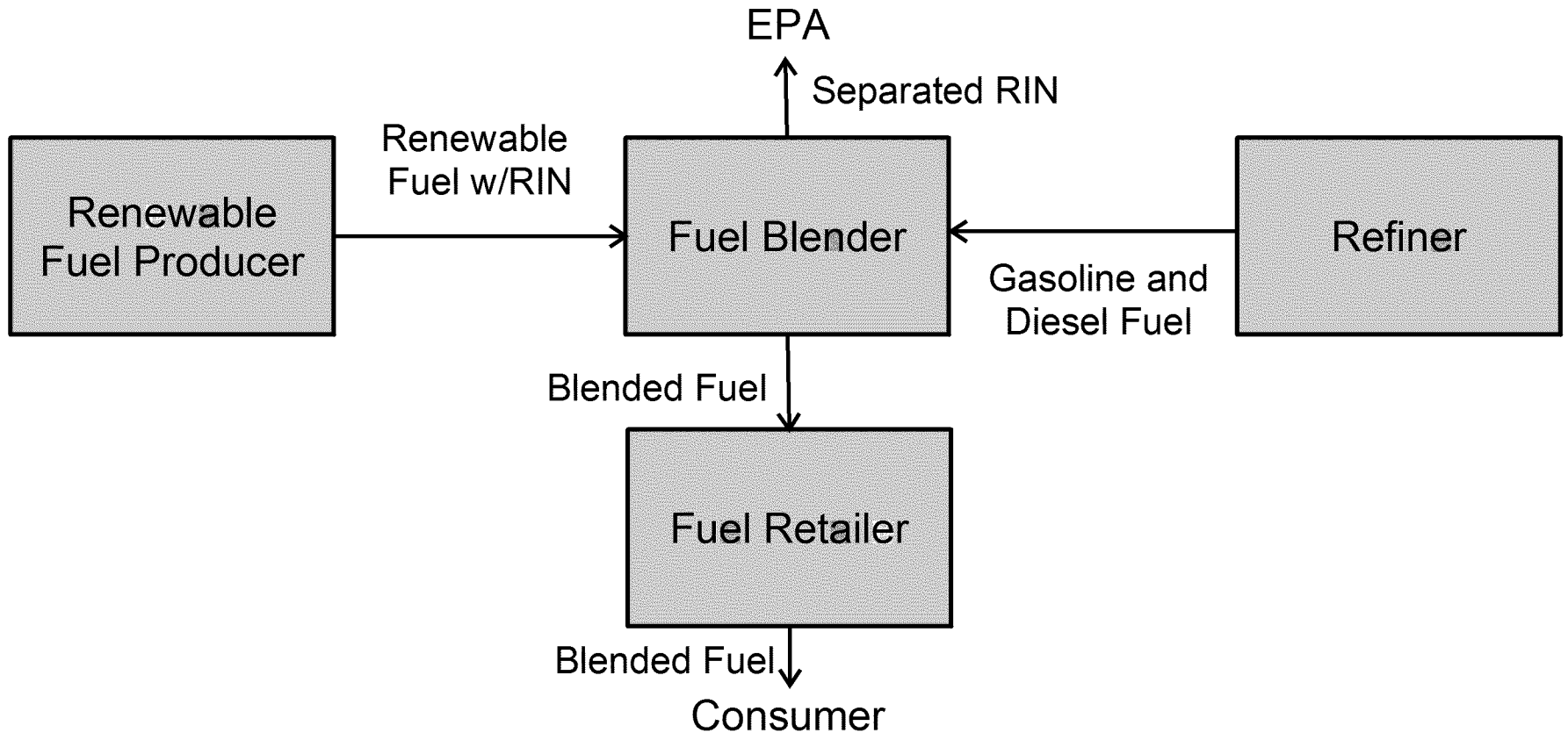
RIN Pass Through Sequence

Refiner as Obligated Party

Step #	Value Flow	Physical Flow	Comments
1	Consumer pays total fuel cost to Fuel Retailer	Consumer receives blended fuel from Fuel Retailer	Total fuel cost includes the cost of the petroleum fuel blend stock, ethanol, and the RIN
2	Fuel Retailer passes total fuel cost to Fuel Blender	Fuel Retailer receives blended fuel from Fuel Blender	Fuel Retailer passes through the RIN value to the Fuel Blender
3	Fuel Blender pays petroleum fuel blend stock and RIN cost to Refiner	Fuel Blender receives petroleum fuel blendstock from Refiner	Refiner receives the petroleum fuel blendstock value
4	Refiner pays RIN cost to Fuel Blender	Refiner receives RIN from Blender	Refiner remits RIN to the EPA
5	Fuel Blender pays ethanol and RIN cost to Renewable Fuel Producer	Fuel Blender receives ethanol with attached RIN	Renewable Fuel Blender receives the ethanol value and the RIN value (as a subsidy)

RIN Demand

Fuel Blender as Obligated Party

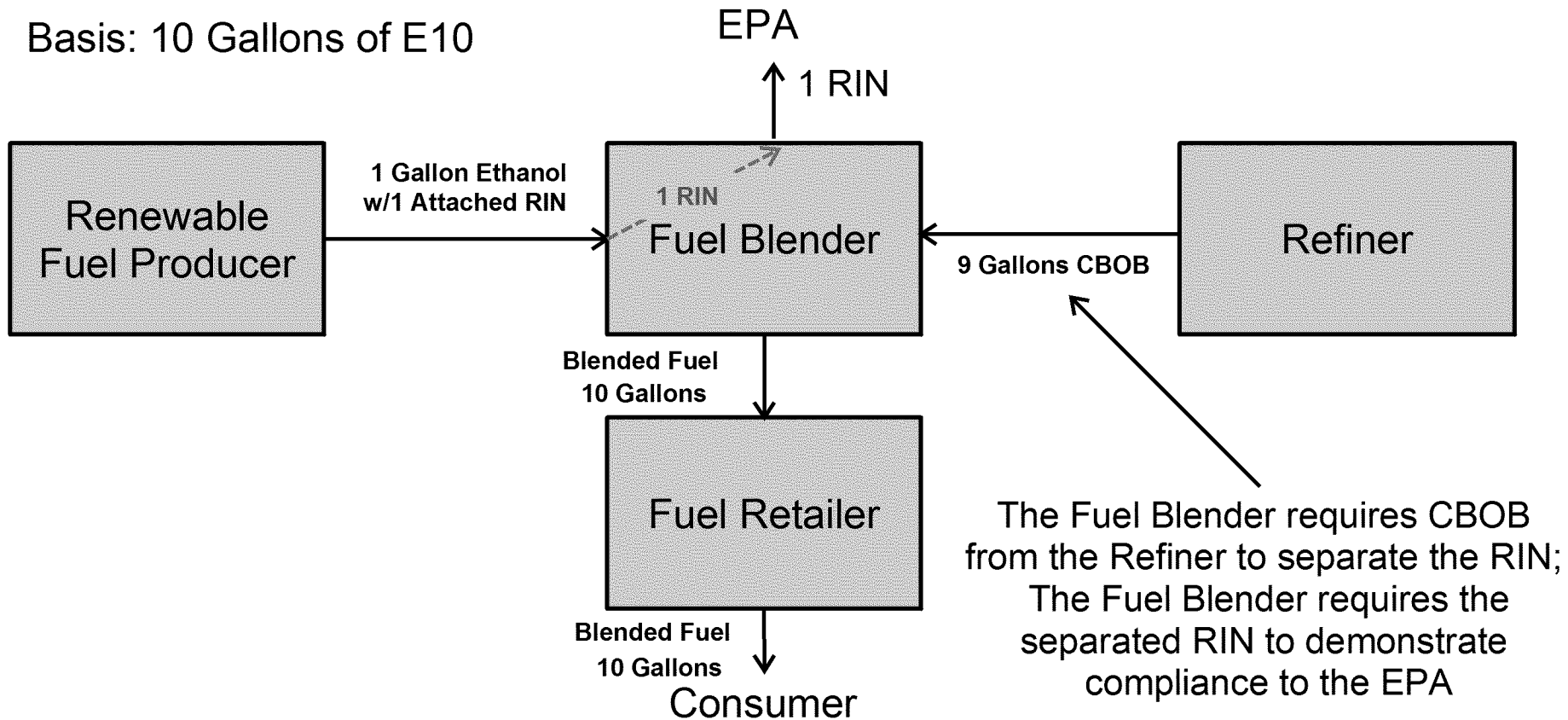


The EPA demands RINs from the Fuel Blender which creates the demand for renewable fuel blending

Physical RIN/Fuel Flow

Fuel Blender as Obligated Party

Basis: 10 Gallons of E10

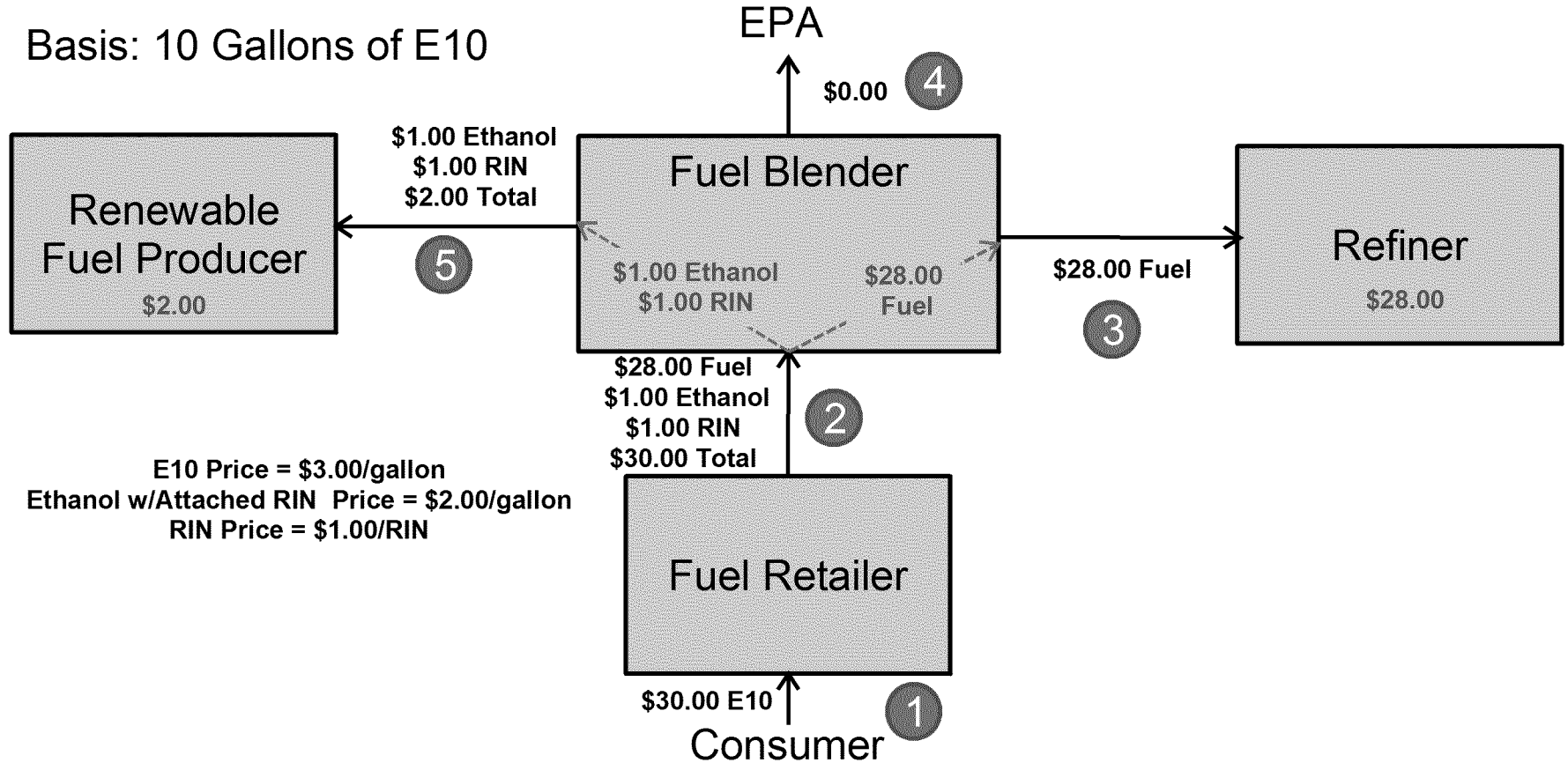


RIN flow connects only the Renewable Fuel Producer and the Fuel Blender to the EPA

RIN Value Flow

Fuel Blender as Obligated Party

Basis: 10 Gallons of E10



The Consumer pays for the RIN value which then passes through the Fuel Blender to subsidize the Renewable Fuel Producer

RIN Pass Through Sequence

Fuel Blender as Obligated Party

Step #	Value Flow	Physical Flow	Comments
1	Consumer pays total fuel cost to Fuel Retailer	Consumer receives blended fuel from Fuel Retailer	Total fuel cost includes the cost of the petroleum fuel blend stock, ethanol, and the RIN
2	Fuel Retailer passes total fuel cost to Fuel Blender	Fuel Retailer receives blended fuel from Fuel Blender	Fuel Retailer passes through the RIN value to the Fuel Blender
3	Fuel Blender pays petroleum fuel blend stock to Refiner	Fuel Blender receives petroleum fuel blendstock from Refiner	Refiner receives the petroleum fuel blendstock value
4	No RIN value flows to the EPA	Fuel Blender remits RIN to the EPA	
5	Fuel Blender pays ethanol and RIN cost to Renewable Fuel Producer	Fuel Blender receives ethanol with attached RIN	Renewable Fuel Producer receives the ethanol value and the RIN value (as a subsidy)

RIN Pass Through Sequence

Comparison

	Refiner Obligated	Blender Obligated	Comments
Consumer	Consumer pays total fuel cost to Fuel Retailer	Consumer pays total fuel cost to Fuel Retailer	No Physical Impact No RIN Value impact
Fuel Retailer	Fuel Retailer passes total fuel cost to Fuel Blender	Fuel Retailer passes total fuel cost to Fuel Blender	No Physical Impact No RIN Value Impact
Fuel Blender	Fuel Blender pays petroleum fuel blend stock plus RIN cost to Refiner and ethanol and RIN cost to Renewable Fuel Producer Fuel Blender separates physical RIN Fuel Blender receives RIN Value from Refiner in exchange for physical RIN	Fuel Blender pays petroleum fuel blend stock cost to Refiner and ethanol and RIN cost to Renewable Fuel Producer Fuel Blender separates physical RIN Fuel Blender remits RIN to EPA	No Net Physical Impact No Net RIN Value Impact
Refiner	Refiner supplies petroleum fuel blendstock and receives petroleum blendstock value plus RIN value Refiner pays RIN value to Fuel Blender in exchange for physical RIN Refiner remits RIN to EPA	Refiner supplies petroleum fuel blendstock and receives petroleum fuel blendstock value	No Net Physical Impact No Net RIN Value Impact
Renewable Fuel Producer	Renewable Fuel Producer supplies ethanol with attached RIN and receives ethanol and RIN value	Renewable Fuel Producer supplies ethanol with attached RIN and receives ethanol and RIN value	No Physical Impact No RIN Value impact