Projection Factors for Biodiesel Production in CA

This is a compilation of factors submitted by CBA members for describing the conditions for low, medium and high projections for total biodiesel production in CA, not just for their individual plants. Please rate each factor from 1 (not significant) to 10 (very significant) as the degree of influence each factor has on that particular Scenario (fill in the yellow cells). For instance, if a factor has no influence on the Low Scenario for biodiesel productior it would be rated 10. All of the factors can be rated the same, or they can all be rated differently. Once you are done with this page proceed to the next page.

| | High Scenario | | | | |
|--------|--|--------|--|--------|--|
| Rating | Low Scenario Factor | Rating | Medium Scenario Factor | Rating | |
| Rating | \$1 Federal Tax Credit disappears. | Rating | \$1 Federal Tax Credit is reinstated for one year and remains a | Rating | \$1 Federal Tax Credit is reinstated for multiple years as a |
| | 31 rederal Tax Credit disappears. | | Blenders Credit that applies to imports. | | Producers credit that only applies to US production. |
| | Federal RVO is lower than availble supply, making RIN values low | | RVO is equal to available supply, making RINs moderate and | | RVO is higher than available supply, making RINs consistent & |
| | and inconsistent | | somewhat consistent. | | strong, creating an incentive for new production. |
| | LCFS is not re-adopted. | | LCFS readopted through 2020. | | LCFS readopted and new targets are set for 2030. |
| | Ed. 5 15 Hot Fe dadpted. | | | | targets are section 2000. |
| | CARB does not audit and enforice LCFS pathway compliance by | | CARB sporadically audits and enforces pathway compliance by | | CARB aggressively audits and enforces pathway compliance by |
| | foreign producers. | | foreign producers. | | foreign producers. |
| | Funding for new & expanded plants is limited. | | Some funding is available through grants new & expanded plants of up to \$20,000,000 per year. | | Low interest loans, loan guarantees and grants are available for for new and expanded plants for up to \$100,000,000 per year. |
| | Feedstock supplies remain constant. | | Some funding is available through grants for low ILUC feedstock expansion of up to \$20,000,000 per year. | | Low interest loans, loan guarantees and grants are available for low ILUC feedstock for up to \$100,000,000 per year. |
| | Biofuel Initiative is not funded. | | Biofuel Initiative is partially funded. | | Biofuel Initiative is fully funded. |
| | Bioliuei mitiative is not funded. | | Biorder mittative is partially funded. | | Biolider initiative is fully funded. |
| | Distribution infrastructure remains the same. | | Some funding is available through grants for distribution | | Low interest loans, loan guarantees and grants are available for |
| | | | infrastructure of up to \$20,000,000 per year. | | distribution infrastructure for up to \$100,000,000 per year. |
| | | | | | |
| | ADF rules require expensive NOx mitigation for all biodiesel blends and limit sales to B5. | | ADF rules require moderately priced NOx mitigation and there are some B20 exemptions for NTDE fleets and truck stops. | | ADF rules require inexpensive NOx mitigation and there are broad B20 exemptions for NTDE fleets and truck stops. |
| | The economy is stagnant. | | The economy sustains low growth. | | The economy expands at a consistent and moderate rate. |
| | Feedstock prices are high and the price of biodiesel is low, with | | Feedstock and biodiesel prices are moderate, with moderate | | Feedstocks are plentiful and reasonably priced, biodiesel prices |
| | small, inconsistent profit margins. | | profit margins. | | are strong, with good, consistent profit margins. |
| | Weak and inconsistent market signals are sent by government policies. | | Moderate market signal are sent by government policies. | | Strong and consistent market signals are sent by government policies. |
| | Biodiesel trade organizations remain constant or decrease slightly. | | Biodiesel trade organizations grow and become moderately more effective. | | Biodiesel trade organizations grow strong and become cohesive and influential. |
| | Crude oil drops below \$40 per barrel. | | Crude oil remains between \$40 to \$75 per barrel. | | Crude oil rises above \$75 per barrel. |
| | Feedstock are prices high and availability is low. | | Feedstock prices high and availability are moderate. | | Abundant inexpensive feedstocks with low carbon ratings become a reality in the California market. |
| | Diesel fuel prices drop even further. | | Diesel prices rise moderately. | | The price of diesel rises to previous highs or higher. |
| | Palm oil receives a fuel pathway in both RFS and LCFS. | | Palm continues to be imported due to the dollar credit but disappears into low value applications such as bunker fuel. | | Palm does not receive an RFS or LCFS pathway and is not imported into the US or CA. |
| | Argentine RFS pathway remains unchallenged allowing 300 MM gallons a year to enter the US. | | Argentine RFS pathway is modified to allow only 150 MM gallons per year to enter the US. | | Aregentine RFS pathway is eliminated and there are no imports into the US or CA. |
| | No biodiesel blend requirement. | | All state and local government diesel vehicles must use B5 or B20 in NTDEs. | | All diesel vehicles in CA must use B5 or B20 in NTDEs. |
| | No state biodiesel tax incentives. | | State taxes reduced for biodiesel blends. | | State taxes eliminated for biodiesel blends. |
| | A significant amount of renewable diesel continues to come into | | Some renewable diesel comes into the CA market at the same | | Some renewable diesel comes into the CA market at the same |
| | the CA market with low prices and carbon intensity, and it is enthusiastically received. | | price and nearly equivalent carbon intensity as biodiesel, and it is received with moderate enthusiasm. | | price but with a higher carbon intensity than biodiesel, and it is not well received. |
| | A significant amount of out-of-state biodiesel continues to come | | Some out-of-state biodiesel comes into the CA market at the | | Some out-of-state biodiesel comes into the CA market at the |
| | into the CA market with low prices and carbon intensity, and it is enthusiastically received. | | same price and nearly equivalent carbon intensity as in-state biodiesel, and it is received with moderate enthusiasm. | | same price as in-state biodiesel but with a higher carbon intensit than biodiesel, and it is not well received. |
| | Some OEMs continue to limit biodiesel use to B5. | | Some OEMs change B5 limit to B20. | | All OEMs support B20. |
| | Natural gas continues to be available at historically low prices and heavy duty diesel truck switch to NG. | | Natural gas prices increase to slightly below biodiesel and the change over of heavy duty truck to NG is moderate. | | Natural gas is the same price as biodiesel, but has a higher CI and is not widely adopted by heavy duty trucks. |
| | | | - | | |

Based upon your rating of the factors on the previous page for low, medium and high scenarios, how many millions of gallons of total CA biodiesel production (all production, not just your company) do you project for each year (fill in the yellow cells)?

| Scenario | | | | | | |
|----------|------|------|------|------|------|------|
| Scenario | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| Low | | | | | | |
| Medium | | | | | | |
| High | | | | | | |

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This is a compilation of factors submitted by CBA members for describing the conditions for low, medium and high projections for total biodiesel production in CA, not just for their individual plants. Please rate each factor from 1 (not significant) to 10 (very significant) as the degree of influence each factor has on that particular Scenario (fill in the yellow cells). For instance, if a factor has no influence on the Low Scenario for biodiesel production it would be rated 1. If a factor has a very significant influence on the Low Scenario it would be rated 10. All of the factors can be rated the same, or they can all be rated differently. Once you are done with this page proceed to the next page.

| Key | Low Scenario | | Medium Scenario | | High Scenario | | | Average All Scenarios 2015 | |
|---------------------------------------|--------------|--|-----------------|---|---------------|---|------|---|--|
| Key | Rating | Factor | Rating | Factor | Rating | Factor | Rati | ng Factor | |
| 100% | 9.6 | LCFS is not re-adopted. | 9.1 | LCFS readopted through 2020. | 9.5 | \$1 Federal Tax Credit is reinstated for multiple years as a Producers credit that only applies to US production. | 9.4 | LCFS | |
| | 8.9 | Feedstock are prices high and availability is low. | 8.8 | Biofuel Initiative is partially funded. | 9.5 | RVO is higher than available supply, making RINs consistent & strong, creating an incentive for new production. | 8.9 | Biofuel Initiative | |
| | 8.6 | Feedstock prices are high and the price of biodiesel is low, with small, inconsistent profit margins. | 8.2 | State taxes reduced for biodiesel blends. | 9.5 | LCFS readopted and new targets are set for 2030. | 8.! | RVO RINS | |
| \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | 8.5 | Biofuel Initiative is not funded. | 7.8 | Feedstock prices high and availability are moderate. | 9.5 | Biofuel Initiative is fully funded. | 8.4 | | |
| %91 | 8.3 | ADF rules require expensive NOx mitigation for all biodiesel blends and limit sales to B5. | | RVO is equal to available supply, making RINs moderate and somewhat consistent. | | All diesel vehicles in CA must use B5 or B20 in NTDEs. | 8.4 | | |
| | 8.3 | Federal RVO is lower than availble supply, making RIN values low and inconsistent | 7.5 | Feedstock and biodiesel prices are moderate, with moderate profit margins. | 9.0 | Feedstocks are plentiful and reasonably priced, biodiesel prices are strong, with good, consistent profit margins. | 8.3 | , | |
| | 8.3 | Palm oil receives a fuel pathway in both RFS and LCFS. | 7.5 | Argentine RFS pathway is modified to allow only 150 MM gallons per year to enter the US. | 8.8 | State taxes eliminated for biodiesel blends. | 8.2 | | |
| %: | 8.1 | No state biodiesel tax incentives. | 7.4 | Moderate market signal are sent by government policies. | 8.3 | Abundant inexpensive feedstocks with low carbon ratings become a reality in the California market. | 7.8 | | |
| | 8.0 | A significant amount of out-of-state biodiesel continues to come into the CA market with low prices and carbon intensity, and it is enthusiastically received. | | \$1 Federal Tax Credit is reinstated for one year and remains a Blenders Credit that applies to imports. | 8.1 | Palm does not receive an RFS or LCFS pathway and is not imported into the US or CA. | 7.8 | Consistent Government Market Signals | |
| - 75 | 8.0 | Weak and inconsistent market signals are sent by government policies. | 7.1 | ADF rules require moderately priced NOx mitigation and there are some B20 exemptions for NTDE fleets and truck stops. | 8.1 | Argentine RFS pathway is eliminated and there are no imports into the US or CA. | 7. | Argentine Imports | |
| 51% | 7.8 | \$1 Federal Tax Credit disappears. | 7.1 | Some out-of-state biodiesel comes into the CA market at the same price and nearly equivalent carbon intensity as in-state | 8.0 | Strong and consistent market signals are sent by government policies. | 7. | Out-of-state Biodiesel Imports | |
| 2 | 7.5 | Argentine RFS pathway remains unchallenged allowing 300 MM gallons a year to enter the US. | 7.0 | Some renewable diesel comes into the CA market at the same price and nearly equivalent carbon intensity as biodiesel, and it | 7.9 | ADF rules require inexpensive NOx mitigation and there are broad B20 exemptions for NTDE fleets and truck stops. | 7.5 | Palm Oil Imports | |
| | 7.5 | A significant amount of renewable diesel continues to come into the CA market with low prices and carbon intensity, and it is | 6.9 | CARB sporadically audits and enforces pathway compliance by foreign producers. | 7.8 | CARB aggressively audits and enforces pathway compliance by foreign producers. | 7.3 | | |
| | 7.3 | CARB does not audit and enforice LCFS pathway compliance by foreign producers. | 6.3 | Diesel prices rise moderately. | 7.5 | Some out-of-state biodiesel comes into the CA market at the same price as in-state biodiesel but with a higher carbon | | CARB Pathway Enforcement | |
| 26% - 50% | 7.1 | Diesel fuel prices drop even further. | 6.3 | Palm continues to be imported due to the dollar credit but disappears into low value applications such as bunker fuel. | 7.5 | All OEMs support B20. | 6.9 | Biodiesel Blend Required | |
| | 6.6 | Some OEMs continue to limit biodiesel use to B5. | 6.3 | Some OEMs change B5 limit to B20. | 7.3 | Some renewable diesel comes into the CA market at the same price but with a higher carbon intensity than biodiesel, and it is | 6.9 | Diesel Price | |
| | 6.4 | Crude oil drops below \$40 per barrel. | 5.9 | Some funding is available through grants for distribution infrastructure of up to \$20,000,000 per year. | 7.3 | The price of diesel rises to previous highs or higher. | 6.8 | OEM Blend Level | |
| | 6.0 | No biodiesel blend requirement. | 5.7 | All state and local government diesel vehicles must use B5 or B20 in NTDEs. | 6.6 | Low interest loans, loan guarantees and grants are available for distribution infrastructure for up to \$100,000,000 per year. | 6.0 | Government Guaranteed Loans for Distribution Infrastructure | |
| | 6.0 | Natural gas continues to be available at historically low prices and heavy duty diesel truck switch to NG. | 5.6 | Crude oil remains between \$40 to \$75 per barrel. | 6.4 | Low interest loans, loan guarantees and grants are available for for new and expanded plants for up to \$100,000,000 per year. | 6.0 | Crude Oil Price | |
| 0% - 25% | 5.5 | Distribution infrastructure remains the same. | 5.4 | Natural gas prices increase to slightly below biodiesel and the change over of heavy duty truck to NG is moderate. | 6.3 | Low interest loans, loan guarantees and grants are available for low ILUC feedstock for up to \$100,000,000 per year. | 5.0 | Natural Gas | |
| | 5.3 | Feedstock supplies remain constant. | 5.1 | Some funding is available through grants for low ILUC feedstock expansion of up to \$20,000,000 per year. | 6.0 | Crude oil rises above \$75 per barrel. | 5. | Government Guaranteed Loans for Feedstocks | |
| | 4.9 | Funding for new & expanded plants is limited. | 5.0 | Some funding is available through grants new & expanded plants of up to \$20,000,000 per year. | 5.5 | Natural gas is the same price as biodiesel, but has a higher CI and is not widely adopted by heavy duty trucks. | 5.4 | Government Guaranteed Loans for Production Facilities | |
| | 4.6 | The economy is stagnant. | 4.3 | The economy sustains low growth. | 5.4 | Biodiesel trade organizations grow strong and become cohesive and influential. | 4.0 | Economic Conditions | |
| | 3.9 | Biodiesel trade organizations remain constant or decrease slightly. | 4.3 | Biodiesel trade organizations grow and become moderately more effective. | 5.0 | The economy expands at a consistent and moderate rate. | 4. | Trade organization | |

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Projected Volume of Biodiesel Production in CA in Million of Gallons

Based upon your rating of the factors on the previous page for low, medium and high scenarios, how many millions of gallons of total CA biodiesel production (all

| Scenario | Year | | | | | | | | | |
|----------|------|------|-------|-------|-------|-------|--|--|--|--|
| Scenario | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | | | | |
| Low | 36.0 | 39.4 | 41.7 | 43.8 | 45.9 | 48.0 | | | | |
| Medium | 49.3 | 59.8 | 75.1 | 89.8 | 121.1 | 154.3 | | | | |
| High | 64.9 | 83.0 | 109.2 | 140.5 | 223.0 | 303.5 | | | | |