Building a Low-Carbon Society

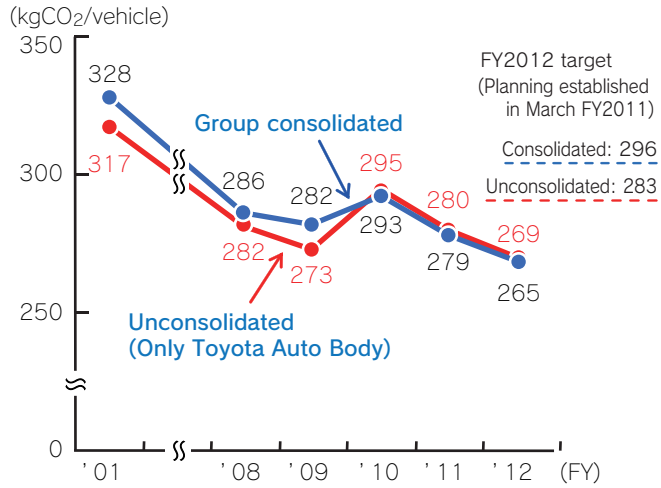
Reducing CO_2 Emissions Volume and Thorough Energy-Saving Activities in Production Activities

Toyota Auto Body is promoting appropriate equipment operation and eliminating daily inefficiencies, and also pursues improved productivity on the production line and the development and introduction of low-CO_2 production technology. We are also making further efforts to improve transport efficiency in production logistics.

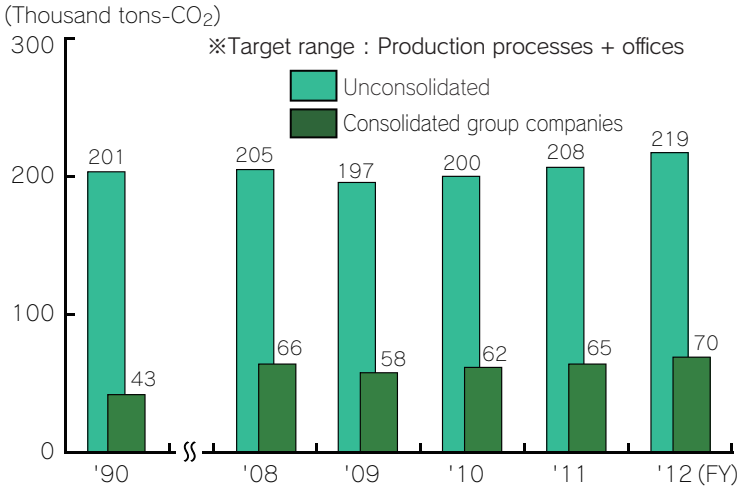
Actively promoting CO_2 reductions through energy-saving activities.

In FY2012, we reduced heat release losses from the drying oven by modifying the painting process at our Fujimatsu Plant. Further reductions were achieved during non-operation through meticulous stopping of machinery and incorporating electrical power-saving circuits during waiting time between tasks of welding robots. We were able to achieve a 4% reduction in CO_2 emissions volume per vehicle compared to the previous year; however, CO_2 emissions volume increased from the previous year due to the increase in vehicles produced and other factors.

CO_2 emissions volume per vehicle



CO_2 emissions volume



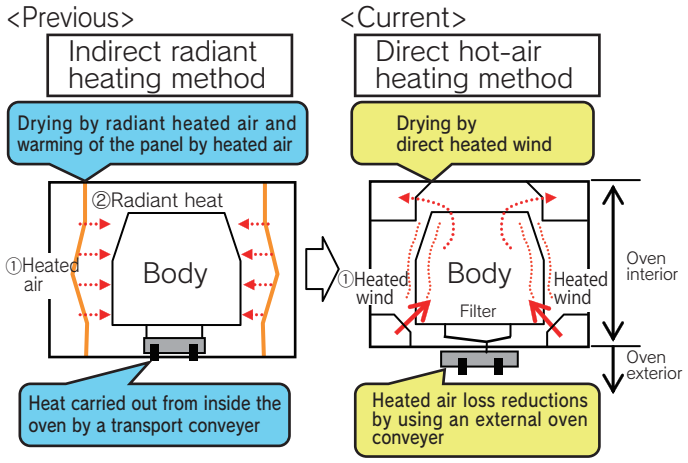
Case Example

<Energy savings in the primer-coat drying oven and sealer process in the Fujimatsu Plant No.2 painting line>

Reduced losses in drying oven heat release from modification of the painting process, and we reduced CO_2 emissions volume by positioning the air-conditioner in the sealer process.

Reduced application of heat energy in the primer-coat drying oven

We achieved reductions in heat release losses by positioning of the transport conveyer outside of the oven and also introducing an energy-efficient direct heat application method, and we also reduced the amount of city gas consumed.

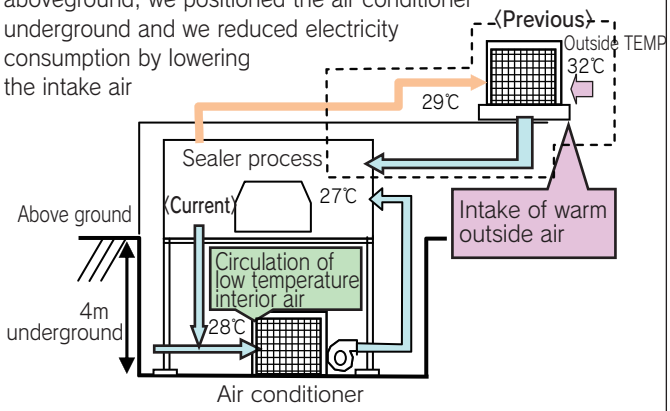


<Heated wind drying issues and countermeasures>

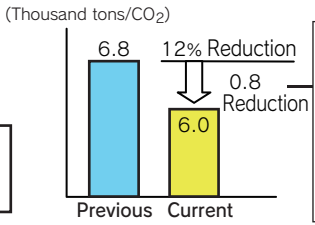
Foreign matter in the heated air attaches to the paint film on the vehicle body	⇒	Foreign matter eliminated by introducing a highly durable filter

Summer air conditioning energy savings in the sealer process

By using low temperature underground air against air aboveground, we positioned the air conditioner underground and we reduced electricity consumption by lowering the intake air



Primer-coat oven, sealer process CO_2 emissions volume



〈Energy-saving measures〉

〈drying oven〉
- Direct heated air drying method (Case example)
- Conveyer transporting heated wind outside the oven
- Appropriateness of burner air fuel

〈Sealer and rust prevention processes〉
- Positioning air conditioner underground (Case example)
- Shortening of process length by improving rust-prevention painting efficiency

click " CO_2 Reduction Efforts in Production, Logistics, and Offices (Energy-saving activities etc.)"