

Specimen: EMDI

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Current Activities

Having determined early on that the Continuous Railway System, CRS, was important and feasible, in August 2021 ASR proceeded with the development of the new rail car that would enable the Embarkation/ Disembarkation of passengers on the fly. The car is named the EMDI™.

ASR is currently in contracts with a national rail lab in America for the 3 Development Phases -- from concept to design and then implementation. The Concept Feasibility study is finished, and the design of all elements of the new rail car are underway. All Federal Railway Administration's (FRA) approvals and regulations are being met. Any new rules or regulations needed for the new car will be handled prior to the EMDI going into service. The timeframe until completion is estimated at two years.

The timeframe to build a new solar railroad between Charlotte/Atlanta is three to four years. We expect the EMDI to be ready well in advance of the High Speed Rail's construction being completed.

Of note, the EU is currently very busy trying to solve for a Continuous Railway System in rail programs that are considered "the most important rail R&I initiative ever." (<https://www.railway-technology.com/news/europes-rail-officially/>).

Since the mid-19th century, it has taken 166 years for the first fully capable HSR Continuous Railway System to be in production. It will take 3-4 years for HSR/CRS to be attached to a carbon-free, 21st Century solar energy supply that will carry it into the 22nd Century and beyond. That is what the crew here at ASR refer to as "Change - at the Speed of Light!"

Patents

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THE THREE INNOVATIONS

There are three areas of focus that will create a winning formula -- one that will separate ASR from current methodologies. We boldly intend to build an advanced model for rail that makes all current models obsolete. We focus on the following areas that make a railroad efficient and effective:

ENERGY

The primary energy for ASR propulsion will be solar energy. The connection of solar energy directly to the traction motors of the locomotive via a catenary system increases the efficiency ~3X over diesel-electric. There is no known way for the advantage of solar electricity over diesel for turning steel wheels to be overcome. Now that high-capacity storage systems can be stationary or mobile with ASR's trains, solar energy's advantage is secure. Sufficient backup NG/H 2 combustion turbines (CTs) will guarantee operations.

OPERATIONS

The creation of an additional method for passengers or freight to access or egress the train on the fly, the EMDI, has a dramatic impact on preserving the average speed of the train. This enables ASR's ability to expand passenger access by increasing the station stops and increasing the number of trains on the tracks. Over time ASR can have more high-speed rail traffic on the tracks stopping at more stations. A train system that stops for access and egress of passengers must increase its top speed and rail construction costs significantly over ASRs to maintain the same average speed.

FINANCIAL

Financial efficiency perhaps the key with the most profound impact. When first the noise from the operational and energy efficiencies occurs to the profit/loss elements, it will be

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Specimen: EMDI

This screenshot shows the American Solar Rail website. The browser's address bar displays <https://www.americansolarrail.com>. The navigation menu includes Home, About, Resources, Careers, Contact, Media, and a prominent green Call Us button. The main content area features the heading "Embrace our vision : Watch the video" with a downward arrow pointing to a video player. The video player shows a blurred image of a train with the text "EMDI" overlaid. A fingerprint icon is visible in the bottom left corner of the page content. The Windows taskbar at the bottom shows the time as 10:29 PM on 11/15/2022.

This screenshot shows the same American Solar Rail website. The browser's address bar displays <https://www.americansolarrail.com>. The navigation menu includes Home, About, Resources, Careers, Contact, Media, and a prominent green Call Us button. The main content area features the heading "Embrace our vision : Watch the video" with a downward arrow pointing to a video player. The video player shows a clear image of a train with the text "EMDI" overlaid. A fingerprint icon is visible in the bottom left corner of the page content. The Windows taskbar at the bottom shows the time as 10:30 PM on 11/15/2022.