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# CIVIL ENGINEERING ACADEMY PODCAST

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## CEA 56 - ASCE'S INFRASTRUCTURE GRADE ON THE ENERGY SECTOR

America's Infrastructure Report Card, produced by the ASCE (American Society of Civil Engineers), is released every four years and has the purpose of bringing to light the existing infrastructure problems and limitations in different sectors within the United States, ranging from bridges and dams, to wastewater and energy. The ASCE's committee is made up of 28 civil engineers who work closely with technical and industry experts. They assess relevant data and reports, and then assign grades based on a criterion that takes into account aspects such as capability, future need, resilience, funding, and more.

Today's episode is all about the last report card, which was released in 2017. We focused on the energy sector, specifically when it comes to electric power generation. The overall grade assigned to the sector as a whole was an alarming D+, which, according to the criterion used, means

that *"(...) A large portion of the system exhibits significant deterioration. Condition and capacity are of serious concern with strong risk of failure"*.

According to the report, the main issue with the electricity segment in the USA is its somewhat 'old' electric grid. Most T&D lines were built in the 50s or 60s, with a lifespan of about 50 years, and they were neither designed to meet today's huge demand nor withstand today's severe climate events. They also mention that the lower 48' States' power grid is operating at full capacity and well beyond its design.

The race to renewable energy sources is here to stay, as well as the vision of a more sustainable future — especially with the significantly high number of electric cars getting out of assembly lines every day. Therefore, the report also points out that, in 2015, 40% of additional power generation came from renewable sources and natural gas, distancing energy from coal and oil.

Issac, as a practicing professional engineer in the energy industry working at a utility firm, is the right person to talk about this previous grade given in 2017, and how it may differ from the next one coming right up in 2021. Why do we face so many issues in the sector? Is it likely that we'll see the same concerns appear once again in the 2021 report card? Maybe. But what are some measures we can take now to make this grade go up for the next report cards? It's all in today's episode!

### Resources

America's Infrastructure Report Card - [2017](#)

Energy Infrastructure Report - [2017](#)

American Society of Civil Engineers - [ASCE](#)

The National Electrical Safety Code - [NESC](#)

[Civil Engineering Academy](#) - If you need exams, solved problems or courses, make sure to check out our home base

[CEA Community](#) – Haven't joined up on our free community? What's wrong with you? J/K. Ok, just go there and join a group of like-minded civil engineers!

[CEA Newsletter](#) - Join over 4000 engineers like you and learn the tips and tricks to passing the FE and PE. We even have a free resource for you!

[Civil PE Review Course](#) - The only thing you need to ace the PE exam;

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