Executive Summary

Airports are major economic drivers, contributing to more than seven percent of the United States' (U.S.) gross domestic product in 2023. Airports and related services are also rapidly electrifying. The growth in electricity demand – and the time required to build power infrastructure to deliver it – means there is significant work to be done now to prepare for the future.

Electrifying Airport Ecosystems aims to raise awareness of the significant power infrastructure investments needed to support electrification in airport ecosystems nationwide.

No one entity can address this challenge alone, and collaboration among airports, industry, technology providers, utilities and regulators will be critical to achieving successful outcomes.

- Timely and strategic electric infrastructure investments are key to support industries that operate in and around airports to avoid disruptions and associated obstacles to economic growth and innovation
- It will require a collective effort to implement essential upgrades to power infrastructure that serves airport ecosystems in a timely and efficient manner
- Planning must begin now to meet increasing electric demands by 2030

No-regrets Investment

This study recommends a near-term focus on no-regrets investments. No-regrets investments refer to decisions and financial commitments that are aligned with long-term needs or strategies which are beneficial under a range of possible future scenarios. They are advantageous because they offer low-risk, high-reward solutions and allow for flexibility during times of change.

Embracing a no-regrets investment strategy can accelerate traditional development timelines and ensure the electric infrastructure is in place when it is needed. A primary goal of this study is to foster collaboration and partnerships among airports, industry, technology providers, utilities and regulators. Electrifying Airport Ecosystems aims to catalyze airport ecosystem stakeholders across the country to perform necessary power needs assessments and to boost understanding that airport ecosystems are "no-regrets" locations for proactive power infrastructure investment.

REGIONAL CASE STUDY, NATIONAL IMPLICATIONS

MSP and DEN international airports were used as examples in this study because of their leading work to assess power demands and their co-location within Xcel Energy’s service territory.

The airports provided data ranging from historical energy use to expansion and electrification plans.

Their leadership has provided a comprehensive view of cross-industry power needs.

Input from more than 50 stakeholders helped create a picture of future power needs.

To achieve the energy transition and decarbonization of transport, detailed power planning is needed at every major airport.

It will take the momentum of a coalition planning and investing to enable, rather than constrain, sustainable electrification.

Invest Now for 2030 Power Needs

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2 Airports Council International North America Infrastructure Needs Report
3 In this study, “power” exclusively denotes electric power.