

2.6 - Generator and Load Mismatches

Reading Assignment: pp. 76-78

Finally, let's **complete** our transmission line circuit, by placing at the beginning of the line a **source**—a device that does **not absorb** electromagnetic energy, but instead **delivers** energy to the circuit.

HO: CONNECTING SOURCE AND LOAD

There are a few special cases of source and load impedance that every electrical engineer "**knows**" to be true—or **do they?**

HO: SPECIAL CASES OF SOURCE AND LOAD

Q: *So, can we now explicitly determine the plus-wave $V^+(z)$ generated on a transmission line?*

A: Absolutely! We simply need to evaluate a **second boundary condition**.

HO: A TRANSMISSION LINE CONNECTING SOURCE AND LOAD

EXAMPLE: BOUNDARY CONDITIONS AND SOURCES

Q: *So, how can we determine the power delivered by a source?*

A: HO: DELIVERED POWER

Q: *So how do we insure that the delivered power is as large as possible?*

A: HO: SPECIAL CASES OF SOURCE IMPEDANCE

Make sure **you** understand how conservation of energy is applied, with respect to **delivered, incident, reflected, and absorbed** power!

EXAMPLE: CONSERVATION OF ENERGY AND YOU