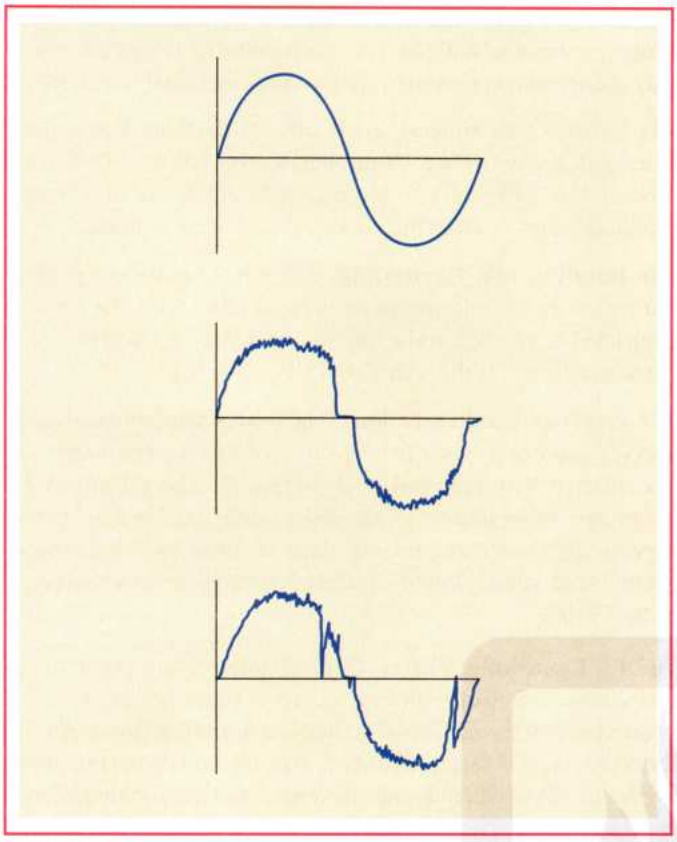

EXHIBIT 705.1 Typical output wave shapes: *(top)* with rotating generator and system wave shape normally encountered with motor, lighting, and heating loads; *(middle)* with inverter source; and *(bottom)* with variable speed drive, rectifier, and uninterruptible power to supply loads.

705.8 System Installation. Installation of one or more electrical power production sources operating in parallel with a primary source(s) of electricity shall be performed only by qualified persons.

Informational Note: See Article 100 for the definition of *Qualified Person*.

Interconnected power production sources introduce hazards unique to systems operating in parallel. Installation and maintenance personnel must be qualified in parallel operation of electrical systems. The *NEC* defines a qualified person but does not detail the additional training necessary to be deemed a qualified person (see *NFPA 70E®, Standard for Electrical Safety in the Workplace®*). Special training for persons working on interconnected systems is key to ensuring that personnel can work safely on these systems.

Δ **705.10 Identification of Power Sources.** Permanent plaques, labels, or directories shall be installed at each service equipment location, or at an approved readily visible location in accordance with the following:

(1) Denote the location of each power source disconnecting means for the building or structure.

Exception: Installations with multiple colocated power production sources shall be permitted to be identified as a group(s). The plaque, label, or directory shall not be required to identify each power source individually.

(2) Indicate the emergency telephone numbers of any off-site entities servicing the power source systems.

Informational Note: See NFPA 1-2021, *Fire Code*, 11.12.2.1.5 for installer information.

(3) Be marked with the wording "CAUTION: MULTIPLE SOURCES OF POWER." The marking shall comply with 110.21(B).

Δ **705.11 Source Connections to a Service.**

Electric power production sources are permitted to be connected on the supply side of the service disconnecting means, or they can be connected on the load side. See Exhibit 705.2.

N **(A) Service Connections.** An electric power production source shall be permitted to be connected to a service by one of the following methods:

(1) To a new service in accordance with 230.2(A)
(2) To the supply side of the service disconnecting means in accordance with 230.82(6)
(3) To an additional set of service entrance conductors in accordance with 230.40, Exception No. 5

These connections shall comply with 705.11(B) through (F).

Δ **(B) Conductors.** Service conductors connected to power production sources shall comply with the following:

(1) The ampacity of the service conductors connected to the power production source service disconnecting means shall not be less than the sum of the power production source maximum circuit current in 705.28(A).
(2) The service conductors connected to the power production source service disconnecting means shall be sized in accordance with 705.28 and not be smaller than 6 AWG copper or 4 AWG aluminum or copper-clad aluminum.
(3) The ampacity of any other service conductors to which the power production sources are connected shall not be less than that required in 705.11(B).

(C) Connections. Connections to service conductors or equipment shall comply with 705.11(C)(1) through (C)(3).

N **(1) Splices or Taps.** Service conductorsplices and taps shall be made in accordance with 230.33 or 230.46 and comply with all applicable enclosure fill requirements.

N **(2) Existing Equipment.** Any modifications to existing equipment shall be made in accordance with the manufacturer's instructions, or the modification must be field evaluated for the application and be field labeled.