



Australian Government

**Assessment Requirements for AVIY0053
Manage remote pilot aircraft systems
energy source requirements**

Release: 1

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Modification History

Release 1. This is the first release of this unit of competency in the AVI Aviation Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions on at least one occasion and include:

- adapting to differences in equipment and operating environment in accordance with standard operating procedures (SOPs)
- applying precautions and required action to minimise, control or eliminate identified hazards
- applying relevant legislation and workplace procedures
- applying relevant safety practices and regulations
- calculating energy source allowances, consumption and endurance
- communicating effectively with others
- completing relevant documentation
- identifying and correctly using relevant equipment
- identifying applicable grade of fuel/fuel cell/battery for remote pilot aircraft system (RPAS) type
- implementing contingency plans
- implementing safety precautions during RPAS refuelling/recharging
- implementing work health and safety (WHS) procedures and relevant regulations
- interpreting and following operational instructions and prioritising work
- maintaining compliance with regulatory requirements
- maintaining relevant workplace records
- managing operation of RPAS energy source systems
- modifying activities depending on workplace contingencies, situations and environments
- monitoring and anticipating operational problems and hazards and taking appropriate action
- monitoring energy source usage to achieve desired profile, range or endurance following configuration changes
- monitoring work activities in terms of planned schedule
- monitoring RPAS endurance
- operating electronic communications equipment to required protocol
- performing energy source quality control checks
- planning RPAS energy source requirements
- reading, interpreting and following relevant regulations, instructions, procedures, information

and signs

- recognising deteriorating situations impacting on energy source requirements
- reporting and/or rectifying identified problems promptly in accordance with regulatory requirements and workplace procedures
- selecting and using required personal protective equipment (PPE) conforming to industry and WHS standards
- working collaboratively with others
- working systematically with required attention to detail without injury to self or others, or damage to goods or equipment.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions and include knowledge of:

- aerodynamic, engine and airframe requirements for RPAS to achieve best range and endurance
- aeronautical decision-making processes
- calculation of conversion between imperial and metric measures
- dangers of using the incorrect grade of fuel/fuel cell/battery
- effective communication
- energy source consumption of RPAS at varying propulsion and systems power settings
- energy source principles relating to RPAS
- energy source reserve requirement for RPAS
- energy source transfer equipment appropriate for the type of RPA and energy source being used
- energy sources, including:
 - battery charger
 - gas
 - liquid fuel
 - other power producing source
 - other renewable energy
 - power producing sources that power the on-board systems and thrust producing components of the specific RPAS
 - solar
- energy source allowances, including:
 - en route and destination meteorological forecasts
 - fixed energy source reserves
 - holding requirements
 - operational tasking requirements
- error management, including error types, causes and consequences
- factors affecting energy source consumption

- hazards that exist when refuelling/recharging RPAS and related hazard control procedures and precautions
- methods of identifying applicable grade of fuel/fuel cell/battery for RPAS type
- mixture leaning or power conservation techniques
- operation of the specific RPAS energy source system
- principles of RPAS energy source systems
- problems that may occur when managing RPAS energy source and appropriate action that should be taken in each case
- regulations and procedures for refuelling/recharging RPAS
- relevant sections of Civil Aviation Safety Regulations (CASRs) and Civil Aviation Orders
- relevant WHS and environmental procedures and regulations
- stress, workload and time pressure management.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must occur in workplace operational situations. Where this is not appropriate, assessment must occur in simulated workplace operational situations that reflect workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or simulations
- acceptable means of simulation assessment
- applicable documentation, including workplace procedures, regulations, codes of practice and operation manuals
- relevant materials, tools, equipment and PPE currently used in industry.

Links

AVI Training Package Companion Volume Implementation Guide available on VET Net: - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=4725260a-0af3-4daf-912b-ef1c2f3e5816>