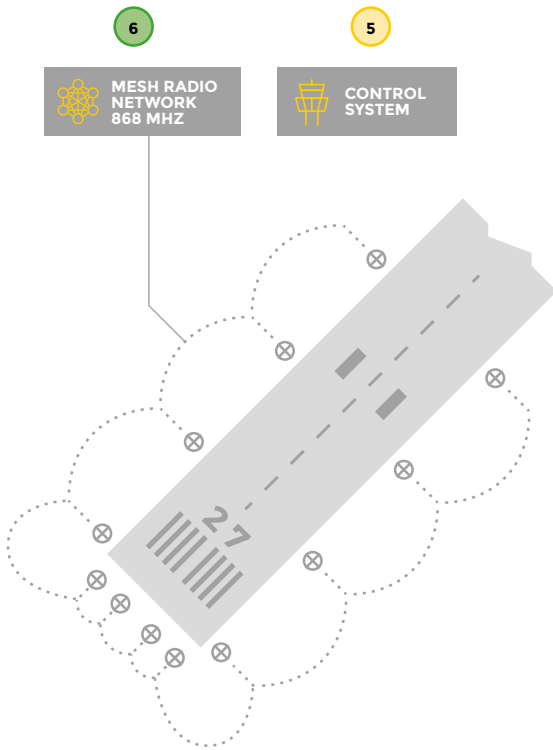


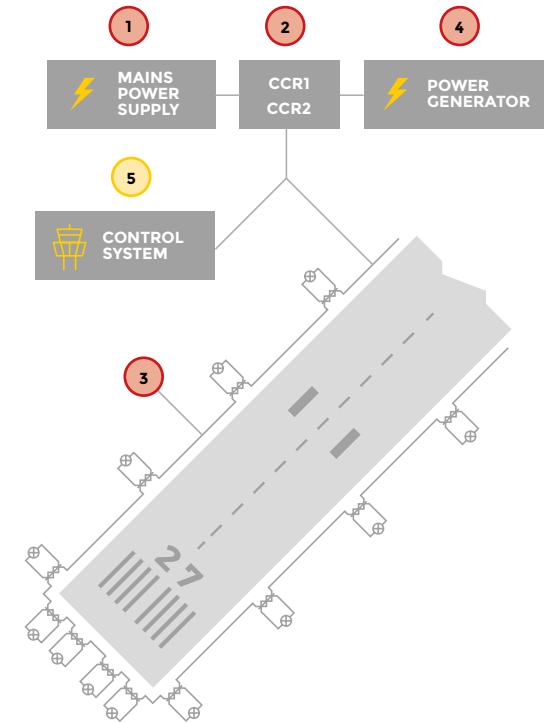
## S4GA SOLAR RUNWAY LIGHTING



## IMPACT ON SAFETY OF AIRPORT'S NIGHT OPERATIONS

OPERATES 365 DAYS ON SOLAR	NO IMPACT	1	EMERGENCY	NO MAINS POWER BACKUP: GENERATOR
NO CCRS ARE REQUIRED	NO IMPACT	2	EMERGENCY	LOSS OF ALL CCRS NO BACKUP
NO ELECTRIC CIRCUIT IS REQUIRED	NO IMPACT	3	EMERGENCY	CIRCUIT FAILURE BACKUP: 2ND CIRCUIT
NO GENERATOR IS REQUIRED	NO IMPACT	4	EMERGENCY	GENERATOR FAILURE NO BACKUP
ALCMS FAILURE BACKUP: CONTROL UNIT	NO IMPACT	5	CRITICAL FAILURE	CONTROL SYSTEM FAILURE BACKUP: CONTROL VIA CCR
RADIO NETWORK FAILURE BACKUP: ON - OFF BUTTON	LOW IMPACT	6	NO IMPACT	NO RADIO NETWORK IS USED IN WIRED AGL

## HARD-WIRED RUNWAY LIGHTING



Airports today are using both S4GA solar and hard-wired runway lighting systems. Both systems are ICAO compliant - however level of redundancy represented by those two systems is different.

Why? Each system consists of critical elements such as power supply system, control system and lighting fixtures. Airfield lighting is designed to have highest possible redundancy available within particular technology.

This comparison represents impact of failure of key elements of each system to airport night operations.

### LEGEND

<b>NO IMPACT</b>	<b>LOW IMPACT</b>	<b>CRITICAL FAILURE</b>	<b>EMERGENCY</b>
No impact means that particular failure has no or insignificant impact on flight operations	Low impact means that failure will cause discomfort for airport operations	Critical failure means that airport has to limit flight operations in case of failure	Emergency means that airport has to stop or limit flight operations in case of failure

## LEVEL 1

### DISTRIBUTED POWER SOURCE

Each light is powered independently

## LEVEL 2

### BACKUP POWER SOURCE

Each light has dual power bank



## LEVEL 3

### POWER INDEPENDENT FROM CONTROL

Radio network is used to control.  
Battery is used as power source



## LEVEL 4

### INDIVIDUAL LIGHT MONITORING

User is notified about potential system malfunction



## LEVEL 5

### CONTROL SYSTEM BACKUP

It is almost impossible to lose control over S4GA lights

