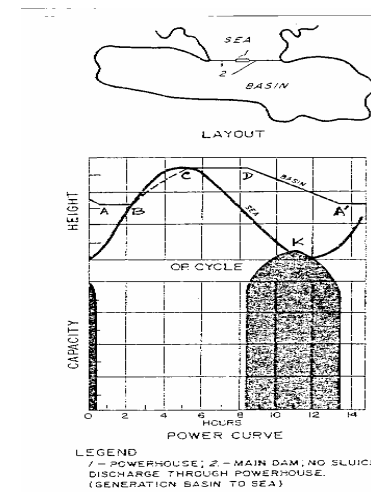


# Tidal Power



Single-basin single-tide working installation

## 1. Single-basin single-tide working installation

A-B

Power house is closed at A. no flow through sea to basin or vice versa.  
 Water level inside basin remains constant from A to B (0.5 to 2.25 hours)

B-C

Discharge through power house starts at pt. B from sea to basin (no power is produced in this direction of flow).

Water level inside basin is gradually increased (shown by dashed line BC), lags behind sea level, ultimately reaches the same level at C.

C-D

Flow through power house is closed at C, sea level starts to decrease after peaking at C, water level inside basin is kept at constant level from C to D.

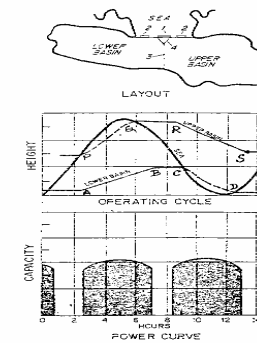
D-A'

Discharge through powerhouse starts at D from basin to sea (power is produced in this direction of flow for this type of installation).

Note that:

A' is the same point A in the cycle but approximately 12 hours 50 minutes later.

Peak power is produced when the level difference is the highest shown by K in capacity curve.



Double-basin single-tide working installation

## 2. Double-basin single-tide working installation

A-B

Dam for basin switchover is set to allow water through power house from sea to lower basin, producing power-1.

P-Q

Main dam sluice (2) open to increase water level of upper basin

Q-R

Sluice (2) is closed at R so upper basins level constant.

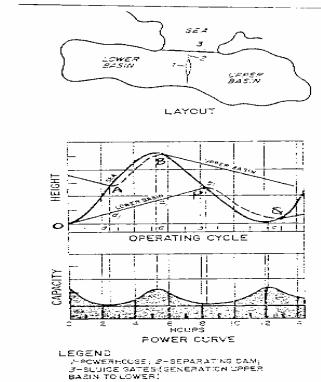
B-C

Sluice of lower basin closed level fixed upto C.

R-S

Dam for basin switchover is set to allow water from upper basin to sea, producing power-2 as shown.

Note: Power-1 and power-2 may not be the same capacity (depends on their respective basin-sea level differences).



DOUBLE-BASIN INSTALLATION  
WITH A POWERHOUSE IN THE  
SEPARATING DAM

## 3. Double basin with power house in the separating dam

A-B Sluice gate 3 for upper basin is opened at A to increase water level upto point B (at B it is closed to hold water level)

Note: That maximum height of upper basin can never reach at the highest sea level as it continuously producing power (flowing water to lower basin).

O-P Lower basin's water level increases from water through power house from upper basin upto point P, where sluice gate 3 is opened to let level go down.

Note: Since lower basin is getting water continuously from upper basin, its level never reaches the lowest.

THANKS TO ALL